



STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 169295

TO: Alton Pryor
Location: 4a39 / 4c70
Art Unit: 1616
Tuesday, October 25, 2005

Case Serial Number: 09/781695

From: Noble Jarrell
Location: Biotech-Chem Library
Rem 1B71
Phone: 272-2556

Noble.jarrell@uspto.gov

Search Notes

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OCT 21 2005

SEARCH REQUEST FORM

Requester's Full Name: Alfon Pryor Examiner #: 74458 Date: 10/21/05
Art Unit: 1616 Phone Number: 2-0621 Serial Number: 09781,695
Location (Bldg/Room#): _____ (Mailbox #): _____ Results Format Preferred (circle): PAPER DISK

To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:

Title of Invention: _____

Inventors (please provide full names): _____

Earliest Priority Date: _____

Search Topic:

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known.

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Search) Claim 12

a) search: formula V

b) search: ~~ethovanadate~~ or rose bengal
or tetrazolium or glyceollin
or glucan or phytophthora sojae
or ion effector or copper saltsc) search: (appl? or treat? or administ?) (3a)
(plant?, or crop? or tree?)

d) combine: a and b and c / a & b (p) c

Search) Claim 23

a) search: formula V

b) search: b as indicated above

c) combine: a and b / a (p) b

STAFF USE ONLY

Searcher: Noble

Searcher Phone #: _____

Searcher Location: _____

Date Searcher Picked Up: 10/25/05Date Completed: 10/25/05Searcher Prep & Review Time: 10Online Time: 77

Type of Search

____ NA Sequence (#)

____ AA Sequence (#)

3 Structure (#)✓ Bibliographic

____ Litigation

____ Fulltext

____ Other

Vendors and cost where applicable

✓ STN _____ Dialog

____ Questel/Orbit _____ Lexis/Nexis

____ Westlaw _____ WWW/Internet

____ In-house sequence systems

____ Commercial _____ Oligomer _____ Score/Length
____ Interference _____ SPDI _____ Encode/Transl

____ Other (specify)

Amendments to the Claims

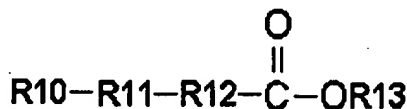
This listing of claims will replace all prior versions, and listings, of the claims in this application.

1 - 11. (Canceled)

12. (Previously Amended) A method of inducing ~~disease-resistance~~ production of isoflavones in a plant comprising applying to the surface of at least part of a plant, which plant is capable of producing an isoflavone, a biologically effective amount of a composition comprising:

a) a nuclear receptor ligand, wherein said nuclear receptor ligand is a peroxisome proliferator having structure V below,

V



wherein R10 is an aromatic ring or rings, or a substituted aromatic ring or rings,

R11 is an O or S,

R12 is a branched aliphatic chain comprising from 3 to 8 carbon atoms,

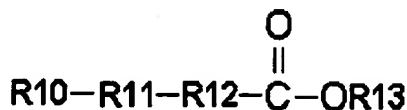
R13 is a hydrogen or an aliphatic chain comprising from 1 to 5 carbon atoms; and

b) one or more compounds that i) enhance the release of isoflavones from a sugar conjugates, ii) enhance the incorporation of aglycones into glyceollin, or iii) enhance the release of isoflavones from sugar conjugates and incorporation of aglycones into glyceollin.

23. (Currently Amended) A composition for inducing disease resistance in a plant or seed, comprising:

(a) one or more nuclear receptor ligands having structure V below:

V



wherein R10 is an aromatic ring or rings, or a substituted aromatic ring or rings,

R11 is an O or S,

R12 is a branched aliphatic chain comprising from 1 to 8 carbon atoms,

R13 is a hydrogen or an aliphatic chain comprising from 1 to 5 carbon atoms; and

(b) one or more enhancing compounds that i) enhance the release of isoflavones from sugar conjugates in the plant or seed, ii) enhance incorporation of aglycones in the plant or seed into glyceollin, or iii) enhance release of isoflavones from sugar conjugates in the plant or seed and incorporation of aglycones in the plant or seed into glyceollin, wherein the enhancing compound is ~~a copper salt or a fragment of the naturally occurring cell wall glucan from *Phytophthora sojae*~~, is chosen from ion effectors, orthovanadate, rose bengal, and tetrazolium redox dyes.

24 – 43. (Canceled)

=> d his

(FILE 'HOME' ENTERED AT 09:04:20 ON 25 OCT 2005)

FILE 'HCAPLUS' ENTERED AT 09:04:31 ON 25 OCT 2005
L1 2 US2002004458/PN OR (US2001-781695# OR US2000-181707#)/AP, PRN

FILE 'REGISTRY' ENTERED AT 09:05:25 ON 25 OCT 2005

FILE 'HCAPLUS' ENTERED AT 09:05:25 ON 25 OCT 2005
L2 TRA L1 1- RN : 48 TERMS

FILE 'REGISTRY' ENTERED AT 09:05:26 ON 25 OCT 2005
L3 48 SEA L2

FILE 'WPIX' ENTERED AT 09:05:31 ON 25 OCT 2005
L4 2 L1

=> b hcap;d all l1 tot

FILE 'HCAPLUS' ENTERED AT 09:05:58 ON 25 OCT 2005
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FILE COVERS 1907 - 25 Oct 2005 VOL 143 ISS 18
FILE LAST UPDATED: 24 Oct 2005 (20051024/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

L1 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2001:597751 HCAPLUS
DN 135:163623
ED Entered STN: 17 Aug 2001
TI Diphenyl ether induction of systemic disease resistance in plants
IN Haddad, William J.; Badenhop, Neil P.; Stammen, Alan D.; Bean, Theodore G.; Graham, Terrence L.; Graham, Lian-mei Y.; Landini, Serena
PA Valent U.S.A. Corp., USA; The Ohio State University Research Foundation
SO PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A01N063-00
CC 5-3 (Agrochemical Bioregulators)
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001058268	A1	20010816	WO 2001-US3681	20010212 <--
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LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
CA 2397364 AA 20010816 CA 2001-2397364 20010212 <--
EP 1253826 A1 20021106 EP 2001-908847 20010212 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
BR 2001008274 A 20030305 BR 2001-8274 20010212 <--
JP 2003522135 T2 20030722 JP 2001-557392 20010212 <--
ZA 2002006342 A 20031110 ZA 2002-6342 20020808
US 2004033902 A1 20040219 US 2002-203513 20020812
PRAI US 2000-181686P P 20000211
US 2000-181707P P 20000211 <--
US 2000-181933P P 20000211
WO 2001-US3681 W 20010212

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001058268	ICM	A01N063-00
WO 2001058268	ECLA	A01N031/06; A01N031/08; A01N033/10; A01N033/22; A01N037/02; A01N037/04; A01N037/06; A01N037/10; A01N037/38; A01N037/48; A01N041/06; A01N043/16; A01N043/22; A01N043/36; A01N043/54; A01N043/713; A01N043/90 <--
US 2004033902	NCL	504/322.000
	ECLA	A01N033/22; A01N037/44; A01N037/48; A01N041/06
OS MARPAT 135:163623		
GI		

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Di-Ph ethers I, II, and III (Markush included) in formulations applied to the surface of a plant induce a long-lasting systemic resistance in plants, thereby protecting the plants against plant pathogens and disease. Furthermore, application of a biol. active formulation containing di-Ph ethers results in an increase in the levels of plant isoflavones.

ST diphenyl ether systemic disease resistance soybean

IT Bean (Phaseolus limensis)
Soybean (Glycine max)
(di-Ph ether induction of systemic disease resistance in)

IT Flavones
RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(isoflavones; increasing level in plants of; by application of di-Ph ethers)

IT Bean (Phaseolus vulgaris)
(pinto; di-Ph ether induction of systemic disease resistance in)

IT Disease resistance, plant
(systemic; induction of systemic disease resistance in plants with di-Ph ethers)

IT 1836-75-5, Nitrofen 1836-77-7, Chlornitrofen 13738-63-1, Fluoronitrofen 15457-05-3, Fluorodifen 32861-85-1, Chlomethoxyfen 42576-02-3, Bifenox 42874-01-1, Nitrofluorfen 42874-03-3, Oxyfluorfen 50594-66-6, Acifluorfen 72178-02-0, Fomesafen 74070-46-5, Aclonifen 77227-69-1, Halosafen 77501-60-1, Fluoroglycofen 77501-63-4, Lactofen 80020-41-3, Furyloxyfen
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)

(induction of systemic disease resistance in plants with)

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

(1) Anonymous; THE ARGOCHEMICALS HANDBOOK 1991, PA1317

L1 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:597745 HCAPLUS

DN 135:148598

ED Entered STN: 17 Aug 2001

TI Inducing production of isoflavones in plants using nuclear receptor ligands

IN Graham, Terrence L.; Graham, Lian-mei Y.; Landini, Serena

PA Ohio State University Research Foundation, USA

SO PCT Int. Appl., 46 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A01N031-00

ICS A01N035-00; A01N037-00; A01N037-44; A01N039-02

CC 5-3 (Agrochemical Bioregulators)

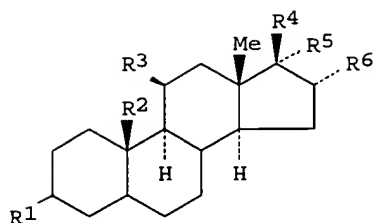
Section cross-reference(s): 11

FAN.CNT 2

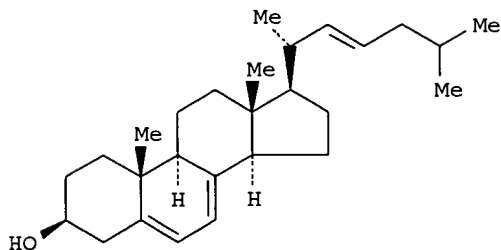
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001058262	A1	20010816	WO 2001-US4420	20010212 <--
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CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001058262	ICM	A01N031-00
	ICS	A01N035-00; A01N037-00; A01N037-44; A01N039-02
WO 2001058262	ECLA	A01N031/06; A01N031/08; A01N033/10; A01N033/22; A01N037/02; A01N037/04; A01N037/06; A01N037/10; A01N037/38; A01N039/02; A01N041/06; A01N043/16; A01N043/22; A01N043/36; A01N043/54; A01N043/713; A01N043/90; A01N045/00; A01N049/00 <--
US 2002004458	NCL	504/320.000
	ECLA	A01N031/06; A01N031/08; A01N033/10; A01N037/02; A01N037/04; A01N037/06; A01N037/10; A01N037/38; A01N043/16; A01N043/22; A01N043/36; A01N043/54; A01N043/713; A01N043/90; A01N045/00 <--
OS	MARPAT	135:148598
GI		



I



II

AB Methods for increasing the levels of isoflavones in plants are provided. The method comprise applying a biol. effective amount of composition comprising a select nuclear receptor ligand to the plant. Compns. for inducing the production of isoflavones in plants are also provided. Such compns. comprise one or preferably, a combination of the select nuclear receptor ligands. The nuclear receptor ligand is: (a) a steroid I (rings A and B have the same or different degrees of saturation; R1 = O or OR ; R2,R5 = H, or Me; R3 = H, OH or O; R4 = R3, CO2H, COCH2OH or COMe; R6 = H, OH or OMe) or II; (b) a phenolic estrogen or di-Ph 4-HOC6H4R7C6H4OH-4 (R7 = bond, alkane or alkene); (c) a long-chain fatty acid R8CO2R9 (R8 = C5-25 aliphatic chain; R9 = H or C 1-5 aliphatic chain); (d) a peroxisome proliferator R10R11 R11R12CO2R13 (R10 = aromatic ring; R11 = O or S; R12, R13 = C1-8 aliphatic chain); or (e) zearalenone. The compns. also comprise a compound that enhances the capacity of the plant to release daidzein and/or utilize it for the production of glyceollin. The action of such a compound is complementary to that of the nuclear receptor ligand.

ST isoflavone prodn plant nuclear receptor ligands

IT Estrogens

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(agonists; nuclear receptor ligand inducer of isoflavone production in plants)

IT Nuclear receptors

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(ligands; inducers of isoflavone production in plants)

IT Fatty acids, biological studies

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(long-chain; nuclear receptor ligand inducer of isoflavone production in plants)

IT Peroxisome proliferators

(nuclear receptor ligand inducer of isoflavone production in plants)

IT Alfalfa (*Medicago sativa*)

Bean (*Phaseolus limensis*)

Chickpea (*Cicer arietinum*)

Peanut (*Arachis hypogaea*)

Plant (*Embryophyta*)

Soybean (*Glycine max*)

(nuclear receptor ligand inducers of isoflavone production in)

IT Bean (*Phaseolus vulgaris*)

(pinto; nuclear receptor ligand inducers of isoflavone production in)

IT Onium compounds

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (tetrazolium, redox dyes; enhancer of nuclear receptor ligand inducers
 of isoflavone production in plants)

IT 9012-72-0, glucan
 RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (Phytophthora sojae cell wall, fragment; enhancer of nuclear receptor
 ligand inducers of isoflavone production in plants)

IT 11121-48-5, Rose bengal 14333-18-7, Orthovanadate
 RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (enhancer of nuclear receptor ligand inducers of isoflavone production in
 plants)

IT 50-02-2, Dexamethasone 50-23-7, Hydrocortisone 50-27-1, Estriol
 50-28-2, 17 β -Estradiol, biological studies 52-39-1, Aldosterone
 53-06-5, Cortisone 53-16-7, Estrone, biological studies 53-41-8,
 Androsterone 56-53-1, Diethylstilbestrol 57-83-0, Progesterone,
 biological studies 57-87-4, Ergosterol 60-33-3, Linoleic acid,
 biological studies 84-16-2, Hexestrol 84-17-3, Dienestrol 112-79-8,
 Elaidic acid 112-80-1, Oleic acid, biological studies 145-13-1,
 Pregnenolone 446-72-0, Genistein 479-13-0, Coumesterol 486-66-8,
 Daidzein 506-32-1, Arachidonic acid 593-39-5, Petroselinic acid
 882-09-7, Clofibrilic acid 6217-54-5 10417-94-4, Eicosapentaenoic acid
 17413-79-5, 2-(2-Chlorophenoxy)-2-methylpropionic acid 17924-92-4,
 Zeaxalenone 52214-84-3, Ciprofibrate
 RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (nuclear receptor ligand inducer of isoflavone production in plants)

IT 446-72-0D, Genistein, conjugates 485-72-3D, Formononetin, aglycon
 486-66-8D, Daidzein, aglycon 574-12-9, isoflavone
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
 (Biological study); PROC (Process)
 (nuclear receptor ligand inducers of isoflavone production in plants)

=> b wpix;d all 14 tot

FILE 'WPIX' ENTERED AT 09:06:31 ON 25 OCT 2005
 COPYRIGHT (C) 2005 THE THOMSON CORPORATION

FILE LAST UPDATED: 24 OCT 2005 <20051024/UP>
 MOST RECENT DERWENT UPDATE: 200568 <200568/DW>
 DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

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 FOR DETAILS. <<<
 'BIX BI,ABEX' IS DEFAULT SEARCH FIELD FOR 'WPIX' FILE

L4 ANSWER 1 OF 2 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
 AN 2001-536494 [59] WPIX

CR 2001-529819 [58]
DNC C2001-159721
TI Method of triggering induced systemic resistance in plant by applying formulation comprising diphenyl ether, useful in combating plant pathogens by inducing isoflavone production.
DC C03 D16
IN BADENHOP, N P; BEAN, T G; GRAHAM, L Y; GRAHAM, T L; HADDAD, W J; LANDINI, S; STAMMEN, A D; GRAHAM, L M Y
PA (OHIS) UNIV OHIO STATE RES FOUND; (VALE-N) VALENT USA CORP; (BADE-I) BADENHOP N P; (BEAN-I) BEAN T G; (GRAH-I) GRAHAM L Y; (GRAH-I) GRAHAM T L; (HADD-I) HADDAD W J; (LAND-I) LANDINI S; (STAM-I) STAMMEN A D
CYC 95
PI WO 2001058268 A1 20010816 (200159)* EN 45 A01N063-00
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2001036672 A 20010820 (200175) A01N063-00
EP 1253826 A1 20021106 (200281) EN A01N063-00
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BR 2001008274 A 20030305 (200322) A01N063-00
KR 2002091090 A 20021205 (200324) A01N031-14
CN 1398159 A 20030219 (200337) A01N063-00
JP 2003522135 W 20030722 (200350) 68 A01N039-02
US 2004033902 A1 20040219 (200414) A01N037-44
ZA 2002006342 A 20040128 (200420) 49 A01N000-00
MX 2002007773 A1 20041001 (200557) A01N063-00
ADT WO 2001058268 A1 WO 2001-US3681 20010212; AU 2001036672 A AU 2001-36672 20010212; EP 1253826 A1 EP 2001-908847 20010212, WO 2001-US3681 20010212; BR 2001008274 A BR 2001-8274 20010212, WO 2001-US3681 20010212; KR 2002091090 A KR 2002-710339 20020809; CN 1398159 A CN 2001-804740 20010212; JP 2003522135 W JP 2001-557392 20010212, WO 2001-US3681 20010212; US 2004033902 A1 WO 2001-US3681 20010212, US 2002-203513 20020812; ZA 2002006342 A ZA 2002-6342 20020808; MX 2002007773 A1 WO 2001-US3681 20010212, MX 2002-7773 20020809
FDT AU 2001036672 A Based on WO 2001058268; EP 1253826 A1 Based on WO 2001058268; BR 2001008274 A Based on WO 2001058268; JP 2003522135 W Based on WO 2001058268; MX 2002007773 A1 Based on WO 2001058268
PRAI US 2000-181933P 20000211; US 2000-181686P 20000211; US 2000-181707P 20000211; US 2002-203513 20020812
IC ICM A01N000-00; A01N031-14; A01N037-44; A01N039-02; A01N063-00
ICS A01G007-00; A01N033-22; A01N037-18; A01N041-06; A01N043-08
AB WO 200158268 A UPAB: 20050907
NOVELTY - Method of triggering induced systemic resistance (ISR) in a plant by applying an effective amount of a biologically active formulation comprising a diphenyl ether to the surface of at least a part of the plant, triggering activation of induced systemic resistance in the plant, thereby inducing systemic resistance to at least one pathogen or disease, is new.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of increasing the levels of isoflavone in a plant by applying a biologically active formulation comprising a diphenyl ether to the surface of at least a part of the plant, inducing release or production of an isoflavone in the plant.
ACTIVITY - Induction of systemic plant resistance.
MECHANISM OF ACTION - None given.
USE - The method is for increasing plant yield, as it maintains or increases the general health of the plant, which preferably a lima bean, pinta bean or soybean (claimed).
ADVANTAGE - Systemic resistance lasts until the plant is harvested (claimed). The method also enhance the glyceollin elicitation competency of the treated plant. The formulation triggers ISR and increases the

isoflavone levels. Treatment of plants with the formulation leads to reduced incidence of pathogen or disease-caused plant damage, exhibiting the beneficial effects of ISR. Plants treated with the formulation are more robust and produce a higher yield upon harvest, suggesting that ISR is broad-based and non-specific, allowing a plant to grow unimpeded throughout the growing season. Advantages over prior art methods included broad spectrum control and less frequent applications. The method of the invention can increase plant yield by a minimum of 0.5% which is an economically significant increase on a large, multi-acre farm. Triggering of ISR and/or increased level of isoflavones results in a systemic resistance that lasts at least several weeks and possibly throughout the growing season and/or life of the plant. In tests, the exposed surfaces of snapped cotyledons were treated with 7 micro l of the diphenyl ether being tested, followed by 7 micro l glucan or water. Cotyledons were incubated in constant light (200 micro Einsteins) for 48 h. Fomesafen, Lactofen and Acifluofen lead to total isoflavone induction levels of 85, 64 and 56%, respectively. Their respective glyceollin induction values were 233, 181 and 122%.

Dwg.0/1

FS CPI

FA AB; DCN

MC CPI: C10-A08; C10-B02G; C10-B04A; C10-C03; C10-D03; C10-G02; C10-G03;
C14-U01C

L4 ANSWER 2 OF 2 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN 2001-529819 [58] WPIX

CR 2001-536494 [59]

DNC C2001-158013

TI New method for combating plant pathogens comprises application of a nuclear ligand receptor capable of inducing isoflavone production to the surface of the plant .

DC C03 D16

IN BADENHOP, N P; BEAN, T G; GRAHAM, L M Y; GRAHAM, T L; HADDAD, W J;
LANDINI, S; STAMMEN, A D; GRAHAM, L Y

PA (OHIS) UNIV OHIO STATE RES FOUND; (VALE-N) VALENT USA CORP; (GRAH-I)
GRAHAM L Y; (GRAH-I) GRAHAM T L; (LAND-I) LANDINI S

CYC 94

PI WO 2001058262 A1 20010816 (200158)* EN 46 A01N031-00
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM
DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2001036672 A 20010820 (200175) A01N063-00

AU 2001036906 A 20010820 (200175) A01N031-00

US 2002004458 A1 20020110 (200208) A01N037-00 <--

MX 2002007773 A1 20041001 (200557) A01N063-00

ADT WO 2001058262 A1 WO 2001-US4420 20010212; AU 2001036672 A AU 2001-36672
20010212; AU 2001036906 A AU 2001-36906 20010212; US 2002004458 A1
Provisional US 2000-181707P 20000211, US 2001-781695
20010212; MX 2002007773 A1 WO 2001-US3681 20010212, MX 2002-7773
20020809

FDT AU 2001036672 A Based on WO 2001058268; AU 2001036906 A Based on WO
2001058262; MX 2002007773 A1 Based on WO 2001058268

PRAI US 2000-181707P 20000211; US 2000-181686P
20000211; US 2000-181933P 20000211; US 2001-781695
20010212

IC ICM A01N031-00; A01N037-00; A01N063-00

ICS A01N035-00; A01N037-44; A01N039-02

AB WO 200158262 A UPAB: 20050907

NOVELTY - Method of inducing isoflavone production in plants comprises:
(a) applying a composition containing a nuclear receptor ligand selected
from a steroid (I) or (II), a phenolic estrogen (III), a long chain fatty
acid (IV), a peroxisome proliferator (V) or a fungal steroid zearalenone
(VI).

DETAILED DESCRIPTION - Method of inducing isoflavone production in plants comprises: (a) applying a composition containing a nuclear receptor ligand selected from a steroid of formulae (I) or (II), a phenolic estrogen of formula (III), a long chain fatty acid of formula (IV), a peroxisome proliferator of formula (V) or a fungal steroid zearalenone of formula (VI).

R1 = OH or O;

R2 = H or Me;

R3 = O, OH or H;

R4 = O, OH, H, CO₂H, C(O)CH₂OH or C(O)Me;

R5 = OH or H;

R6 = Me, OH or H;

R7 = single bond or optionally branched alkene or alkane;

R8 = optionally unsaturated 5-25C aliphatic chain;

R9 = H or 1-5C aliphatic chain;

R10 = aromatic ring or rings;

R11 = O or S;

R12 = 1-8C branched or linear aliphatic chain;

R13 = 1-5C aliphatic chain.

An INDEPENDENT CLAIM is also included for a composition for enhancing levels of isoflavones in a plant or seed comprising one or more compounds which enhance the activity of the nuclear receptor ligand, the nuclear receptor ligands being selected from compounds (I)-(VI).

ACTIVITY - Plant Protectant; Fungicide; Nematocide; Insecticide; Herbicide.

MECHANISM OF ACTION - Isoflavone production enhancer.

Levels of soybean leaf isoflavone were measured on treatment with ergosterol. After 48 hours, ergosterol at 10 micro M caused a 1.1-fold, 3-fold and 27-fold increase in genistein conjugates, diadzein aglycone and formononetin aglycone respectively. These results show that low concentrations of the nuclear receptor ligands induce isoflavones in soybean leaves, and redirect normal isoflavone metabolic pathways to produce new compounds.

USE - The method is for improving disease resistance in plants by inducing isoflavone production. It is expected that the invention will provide specific and/or broad spectrum disease control including prevention of fungal infections and infection by bacterial, viral and nematode pathogens. The composition can also be administered to seeds of the plant to increase isoflavones in sprouts of the seed thereby providing a highly beneficial food for human consumption.

ADVANTAGE - It was determined that plants treated with a formulation of the invention had a higher level of isoflavones than found in non-treated plants. In tests in the cut cotyledon assay over a range of concentrations (50-500 pM), the following activities for nuclear ligand receptors were obtained (expressed as the range of increase of isoflavones seen over this concentration range): progesterone 20-60%; androsterone 30-40%; hydrocortisone 25-50%; cortisone 30-100%; dexamethasone 0-10% and 5-pregnenolone 5-20%.

Dwg. 0/13

FS CPI

FA AB; GI; DCN

MC CPI: C01-A01; C01-A02; C01-C01; C01-C02; C01-C03; C01-C04; C01-D01;
C01-D02; C05-A03B; C06-A02; C06-A03; C10-C03; C10-C04E; C10-E02;
C14-A04; C14-B03A; C14-B04B; C14-U02; C14-V01; D05-H08

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FILE 'HOME' ENTERED AT 09:06:35 ON 25 OCT 2005

=>

=> b reg
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 DICTIONARY FILE UPDATES: 24 OCT 2005 HIGHEST RN 865981-77-7

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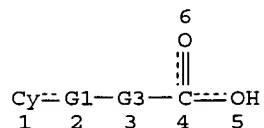
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* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,  *
* effective March 20, 2005. A new display format, IDERL, is now    *
* available and contains the CA role and document type information. *
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Structure search iteration limits have been increased. See HELP SLIMITS
 for details.

REGISTRY includes numerically searchable data for experimental and
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<http://www.cas.org/ONLINE/UG/regprops.html>

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L10         SCR 1838
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L17         SCR 2039 OR 2041 OR 2050 OR 2049 OR 2048 OR 2053 OR 2052 O
R 2043 OR 2054
L19         STR
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DEFAULT ECLEVEL IS LIMITED
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STEREO ATTRIBUTES: NONE
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AND L20 NOT L17

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SEARCH TIME: 00.00.13

8781 ANSWERS

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L25 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2005 ACS on STN
RN 11121-48-5 REGISTRY
ED Entered STN: 16 Nov 1984
CN Rose Bengal (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Bengal Rose
CN Rose Bengale
MF Unspecified
CI COM, MAN
LC STN Files: AGRICOLA, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO,
CA, CABA, CANCERLIT, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN,
CSCHEM, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE,
MSDS-OHS, NIOSHTIC, PIRA, PROMT, RTECS*, TOXCENTER, USPAT2, USPATFULL
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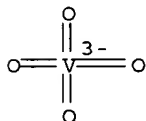
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2423 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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L26 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2005 ACS on STN
RN 14333-18-7 REGISTRY
ED Entered STN: 16 Nov 1984
CN Vanadate (VO43-), (T-4)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Vanadate (VO43-) (8CI)
OTHER NAMES:
CN Orthovanadate
CN Tetraoxovanadate(3-)
CN Vanadate (VO43-) ion
CN Vanadate ion (VO43-)
DR 76008-43-0
MF 04 V
CI CCS, COM
LC STN Files: AGRICOLA, AQUIRE, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS,
DDFU, DRUGU, EMBASE, NIOSHTIC, TOXCENTER, USPAT2, USPATFULL



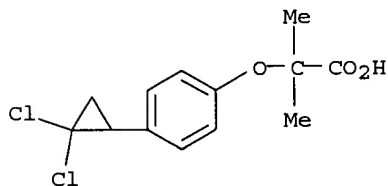
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1367 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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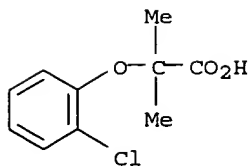
L47 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 52214-84-3 REGISTRY
 ED Entered STN: 16 Nov 1984
 CN Propanoic acid, 2-[4-(2,2-dichlorocyclopropyl)phenoxy]-2-methyl- (9CI)
 (CA INDEX NAME)
 OTHER NAMES:
 CN (±)-Ciprofibrate
 CN 2-[p-(2,2-Dichlorocyclopropyl)phenoxy]-2-methylpropionic acid
 CN Ciprofibrate
 CN Ciprol
 CN Lipanor
 CN Modalim
 CN Win 35833
 FS 3D CONCORD
 DR 128660-46-8
 MF C13 H14 Cl2 O3
 CI COM
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS,
 BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CBNB, CHEMCATS,
 CHEMINFORMRX, CHEMLIST, CIN, CSCHM, DDFU, DRUGU, EMBASE, IFICDB,
 IFIPAT, IFIUDB, IMSPATENTS, IMSRESEARCH, IPA, MEDLINE, MRCK*, NIOSHTIC,
 PHAR, PROMT, PROUSDDR, PS, RTECS*, SCISEARCH, SYNTHLINE, TOXCENTER,
 USAN, USPAT2, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: EINECS**, WHO
 (**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

522 REFERENCES IN FILE CA (1907 TO DATE)
 5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 522 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L47 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 17413-79-5 REGISTRY
 ED Entered STN: 16 Nov 1984
 CN Propanoic acid, 2-(2-chlorophenoxy)-2-methyl- (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Propionic acid, 2-(o-chlorophenoxy)-2-methyl- (6CI, 8CI)
 OTHER NAMES:
 CN α-(o-Chlorophenoxy)isobutyric acid
 CN 2-(2-Chlorophenoxy)-2-methylpropionic acid
 CN o-Chlorophenoxyisobutyric acid
 FS 3D CONCORD
 MF C10 H11 Cl O3
 LC STN Files: BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS,
 IFICDB, IFIPAT, IFIUDB, RTECS*, TOXCENTER, USPATFULL
 (*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

39 REFERENCES IN FILE CA (1907 TO DATE)
 39 REFERENCES IN FILE CAPLUS (1907 TO DATE)
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L47 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2005 ACS on STN

RN 882-09-7 REGISTRY

ED Entered STN: 16 Nov 1984

CN Propanoic acid, 2-(4-chlorophenoxy)-2-methyl- (9CI) (CA INDEX NAME)

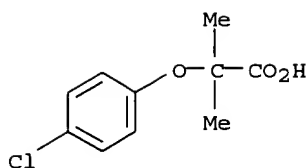
OTHER CA INDEX NAMES:

CN Propionic acid, 2-(p-chlorophenoxy)-2-methyl- (6CI, 7CI, 8CI)

OTHER NAMES:

CN (p-Chlorophenoxy)isobutyric acid
 CN α -(4-Chlorophenoxy)- α -methylpropionic acid
 CN α -(4-Chlorophenoxy)isobutyric acid
 CN α -(p-Chlorophenoxy)isobutyric acid
 CN 2-(4-Chlorophenoxy)-2-methylpropanoic acid
 CN 2-(4-Chlorophenoxy)-2-methylpropionic acid
 CN 2-(p-Chlorophenoxy)-2-methylpropionic acid
 CN 2-(p-Chlorophenoxy)isobutyric acid
 CN 2-[(4-Chlorophenyl)oxy]-2-methylpropionic acid
 CN 4-Chlorophenoxyisobutyric acid
 CN Arteriohom
 CN Chlorfibrinic acid
 CN Chlorofibrinic acid
 CN Chlorophibrinic acid
 CN Clofibrate free acid
 CN Clofibric acid
 CN Clofibrilic acid
 CN Clofibrin
 CN Clofibrinic acid
 CN CPIB
 CN CPIBA
 CN NSC 1149
 CN PCIB
 CN PCPIB
 CN Regadrin
 CN Regulipid
 FS 3D CONCORD
 DR 60120-73-2, 94592-92-4
 MF C10 H11 Cl O3
 CI COM
 LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS,

BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS,
 CHEMLIST, CSCHM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, IFICDB, IFIPAT,
 IFIUDB, IPA, MEDLINE, MRCK*, NIOSHTIC, PROMT, PS, RTECS*, SYNTHLINE,
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 (*File contains numerically searchable property data)
 Other Sources: EINECS**, WHO
 (**Enter CHEMLIST File for up-to-date regulatory information)



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1231 REFERENCES IN FILE CA (1907 TO DATE)
 32 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
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 26 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

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L1 2 SEA ABB=ON PLU=ON US2002004458/PN OR (US2001-781695# OR
 US2000-181707#)/AP,PRN

FILE 'REGISTRY' ENTERED AT 09:05:25 ON 25 OCT 2005

L2 FILE 'HCAPLUS' ENTERED AT 09:05:25 ON 25 OCT 2005
 TRA L1 1- RN : 48 TERMS

FILE 'REGISTRY' ENTERED AT 09:05:26 ON 25 OCT 2005

L3 48 SEA ABB=ON PLU=ON L2

FILE 'WPIX' ENTERED AT 09:05:31 ON 25 OCT 2005

L4 2 SEA ABB=ON PLU=ON US2002004458/PN OR (US2001-781695# OR
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L5 STR
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 L7 STR L5
 L8 39 SEA SSS SAM L7
 L9 SCR 1312 OR 1199
 L10 SCR 1838
 L11 SCR 1707 OR 1708
 D QUE STA L8
 L12 50 SEA SSS SAM L7 AND L9 AND L10 AND L11
 L13 STR L7
 L14 0 SEA CSS SAM L13 AND L9 AND L10 AND L11
 L15 SCR 2006
 L16 0 SEA CSS SAM L13 AND L9 AND L10 AND L11 AND L15
 L17 SCR 2039 OR 2041 OR 2050 OR 2049 OR 2048 OR 2053 OR 2052 OR 204
 L18 50 SEA SSS SAM L13 AND L9 AND L10 AND L11 AND L15 NOT L17
 L19 STR L13
 L20 SCR 1700
 L21 22 SEA SSS SAM L19 AND L9 AND L10 AND L11 AND L15 AND L20 NOT L17
 L22 8781 SEA SSS FUL L19 AND L9 AND L10 AND L11 AND L15 AND L20 NOT L17
 SAV TEM PRY695F0/A L22
 L23 STR L13
 L24 50 SEA SSS SAM L23 AND L9 AND L10 AND L11 AND L15 NOT L17
 L25 1 SEA ABB=ON PLU=ON L3 AND 11121-48-5
 L26 1 SEA ABB=ON PLU=ON L3 AND 14333-18-7
 L27 38 SEA ABB=ON PLU=ON O4V AND CCS/CI
 L28 20 SEA ABB=ON PLU=ON L27 NOT VANADIUM

L29 18 SEA ABB=ON PLU=ON L27 NOT L28
 L30 38 SEA ABB=ON PLU=ON (L27 OR L28 OR L29)

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L31 1496 SEA ABB=ON PLU=ON L30
 L32 24690 SEA ABB=ON PLU=ON ORTHOVANADATE? OR VANADATE?
 E ORTHOVANDAT/CT
 E ORTHOVANADATE/CT
 E E3+ALL
 L33 1367 SEA ABB=ON PLU=ON ORTHOVANADATE/CT
 L34 2423 SEA ABB=ON PLU=ON L25
 L35 4302 SEA ABB=ON PLU=ON BENGAL (1A) ROSE
 L36 7033 SEA ABB=ON PLU=ON L22
 L37 5 SEA ABB=ON PLU=ON L36 AND (L31 OR L32 OR L33 OR L34 OR L35)
 E GRAHAM T/AU
 L38 52 SEA ABB=ON PLU=ON ("GRAHAM T"/AU OR "GRAHAM T L"/AU)
 E GRAHAM TERRENCE/AU
 L39 16 SEA ABB=ON PLU=ON "GRAHAM TERRENCE L"/AU
 E GRAHAM L/AU
 L40 35 SEA ABB=ON PLU=ON ("GRAHAM L"/AU OR "GRAHAM L M"/AU)
 E GRAHAM LIAN/AU
 L41 2 SEA ABB=ON PLU=ON "GRAHAM LIAN MEI Y"/AU
 D BIB L1
 E LANDINI S/AU
 L42 9 SEA ABB=ON PLU=ON ("LANDINI S"/AU OR "LANDINI SERENA"/AU)
 L43 0 SEA ABB=ON PLU=ON L37 AND (L38 OR L39 OR L40 OR L41 OR L42)

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 L45 25 SEA ABB=ON PLU=ON L3 AND 46.150.18/RID AND (O OR S)/ELS
 L46 25 SEA ABB=ON PLU=ON L45 AND O>=2
 L47 3 SEA ABB=ON PLU=ON L46 AND (C10H11CLO3 OR C13H14CL2O3)

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L48 1719 SEA ABB=ON PLU=ON L47
 L49 3 SEA ABB=ON PLU=ON L47 AND (L31 OR L32 OR L33 OR L34 OR L35)
 L50 1 SEA ABB=ON PLU=ON L49 AND (L38 OR L39 OR L40 OR L41 OR L42)
 L51 2 SEA ABB=ON PLU=ON L49 NOT L50
 L52 2801 SEA ABB=ON PLU=ON FLAVONES+OLD,NT/CT (L) (ISO OR ISOFLAVONE?)
 E ONIUM COMPOUNDS/CT
 E E3+ALL
 L53 17 SEA ABB=ON PLU=ON ONIUM COMPOUNDS+NT/CT (L) (TETRAZOL? (L)
 REDOX)
 E TRAZOL/CT
 E TETRAZOL/CT
 L54 1 SEA ABB=ON PLU=ON L53 AND (L22 OR L47)
 L55 15 SEA ABB=ON PLU=ON L52 AND (L22 OR L47)
 L56 1 SEA ABB=ON PLU=ON L55 AND (L38 OR L39 OR L40 OR L41 OR L42)
 L57 14 SEA ABB=ON PLU=ON L55 NOT L56
 L58 35443 SEA ABB=ON PLU=ON FLAVONES+OLD,NT/CT
 L59 142 SEA ABB=ON PLU=ON L58 AND (L22 OR L47)
 L60 3 SEA ABB=ON PLU=ON ONIUM COMPOUNDS+NT/CT (L) TETRAZOL? AND
 (L22 OR L47)
 L61 1 SEA ABB=ON PLU=ON L60 AND (L38 OR L39 OR L40 OR L41 OR L42)
 L62 2 SEA ABB=ON PLU=ON L60 NOT L61
 L63 2 SEA ABB=ON PLU=ON ROSE (1A) BENGAL# AND (L22 OR L47)
 L64 1 SEA ABB=ON PLU=ON L63 AND (L38 OR L39 OR L40 OR L41 OR L42)
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 L67 5 SEA ABB=ON PLU=ON (L51 OR L62 OR L65)

FILE 'EMBASE' ENTERED AT 11:39:13 ON 25 OCT 2005

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 L69 909 SEA ABB=ON PLU=ON CIPROFIBRATE OR CIPRL# OR LIPANOR# OR
 MODALIM# OR WIN35833 OR WIN35(W)833 OR WIN(W) (35833 OR
 35(W)833)

L70 1059 SEA ABB=ON PLU=ON (CHLORFIBRINIC OR CHLOROFIBRINIC OR
CLOFIBRIC) (2A)ACID OR CLOFIBRIN OR CPIB# OR PCIB OR PCPIB OR
REGADRIN# OR REGULIPID
L71 95 SEA ABB=ON PLU=ON (CHLOROPHENOXY OR CHLORO(W)PHENOXY)
(1A) (ISOBUTYRIC OR METHYLPROPIONIC) (1A)ACID OR (CHLOROPHENOXYIS
OBUTYRIC OR CHLOROPHENOXYMETHYLPROPIONIC) (W)ACID
L72 3409 SEA ABB=ON PLU=ON (L68 OR L69 OR L70 OR L71)

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L73 2315 SEA ABB=ON PLU=ON (L68 OR L69 OR L70 OR L71)
L74 0 SEA ABB=ON PLU=ON (ISO (1A)FLAVONE# OR ISOFLAVONE#) AND L73

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E E3+ALL
E ISOFLAVONES/CT
E E3+ALL
E E2+ALL
L77 1108 SEA ABB=ON PLU=ON ISOFLAVONE DERIVATIVE/CT
L78 0 SEA ABB=ON PLU=ON L72 AND L77

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L79 1890 SEA ABB=ON PLU=ON (L68 OR L69 OR L70 OR L71)
E ISOFLAVONES/CT
L80 0 SEA ABB=ON PLU=ON ISOFLAVONES+NT/CT AND L79

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E E3+ALL
L82 0 SEA ABB=ON PLU=ON ISOFLAVONES+NT/CT AND L81

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E E3+ALL
L84 4 SEA ABB=ON PLU=ON ISOFLAVONES+NT/CT AND L83

=> b hcap

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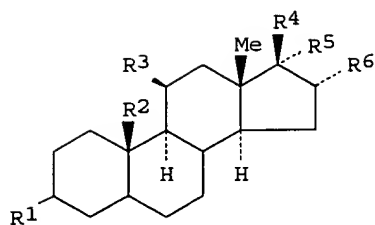
L66 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2001:597745 HCAPLUS
 DN 135:148598
 ED Entered STN: 17 Aug 2001
 TI Inducing production of isoflavones in plants using nuclear receptor
 ligands
 IN Graham, Terrence L.; Graham, Lian-mei Y.;
 Landini, Serena
 PA Ohio State University Research Foundation, USA
 SO PCT Int. Appl., 46 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM A01N031-00
 ICS A01N035-00; A01N037-00; A01N037-44; A01N039-02
 CC 5-3 (Agrochemical Bioregulators)
 Section cross-reference(s): 11
 FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001058262	A1	20010816	WO 2001-US4420	20010212
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
US 2002004458	A1	20020110	US 2001-781695	20010212
PRAI US 2000-181707P	P	20000211		

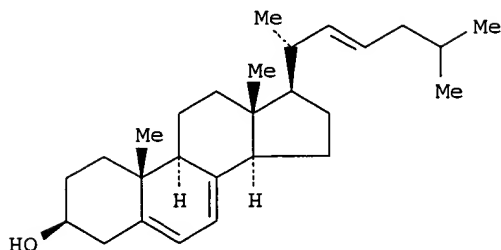
CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001058262	ICM	A01N031-00
	ICS	A01N035-00; A01N037-00; A01N037-44; A01N039-02
WO 2001058262	ECLA	A01N031/06; A01N031/08; A01N033/10; A01N033/22; A01N037/02; A01N037/04; A01N037/06; A01N037/10; A01N037/38; A01N039/02; A01N041/06; A01N043/16; A01N043/22; A01N043/36; A01N043/54; A01N043/713; A01N043/90; A01N045/00; A01N049/00
US 2002004458	NCL	504/320.000
	ECLA	A01N031/06; A01N031/08; A01N033/10; A01N037/02; A01N037/04; A01N037/06; A01N037/10; A01N037/38; A01N043/16; A01N043/22; A01N043/36; A01N043/54; A01N043/713; A01N043/90; A01N045/00

OS MARPAT 135:148598
 GI



I



II

AB Methods for increasing the levels of isoflavones in plants are provided. The method comprise applying a biol. effective amount of composition comprising a select nuclear receptor ligand to the plant. Compns. for inducing the production of isoflavones in plants are also provided. Such compns. comprise one or preferably, a combination of the select nuclear receptor ligands. The nuclear receptor ligand is: (a) a steroid I (rings A and B have the same or different degrees of saturation; R1 = O or OR ; R2,R5 = H, or Me; R3 = H, OH or O; R4 = R3, CO2H, COCH2OH or COMe; R6 = H, OH or OMe) or II; (b) a phenolic estrogen or di-Ph 4-HOC6H4R7C6H4OH-4 (R7 = bond, alkane or alkene); (c) a long-chain fatty acid R8CO2R9 (R8 = C5-25 aliphatic chain; R9 = H or C 1-5 aliphatic chain); (d) a peroxisome proliferator R10R11 R11R12CO2R13 (R10 = aromatic ring; R11 = O or S; R12, R13 = C1-8 aliphatic chain); or (e) zearalenone. The compns. also comprise a compound that enhances the capacity of the plant to release daidzein and/or utilize it for the production of glyceollin. The action of such a compound is complementary to that of the nuclear receptor ligand.

ST isoflavone prodn plant nuclear receptor ligands

IT Estrogens

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(agonists; nuclear receptor ligand inducer of isoflavone production in plants)

IT Nuclear receptors

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(ligands; inducers of isoflavone production in plants)

IT Fatty acids, biological studies

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(long-chain; nuclear receptor ligand inducer of isoflavone production in plants)

IT Peroxisome proliferators

(nuclear receptor ligand inducer of isoflavone production in plants)

IT Alfalfa (*Medicago sativa*)

Bean (*Phaseolus limensis*)

Chickpea (*Cicer arietinum*)

Peanut (*Arachis hypogaea*)

Plant (*Embryophyta*)

Soybean (*Glycine max*)

(nuclear receptor ligand inducers of isoflavone production in)

IT Bean (*Phaseolus vulgaris*)

(pinto; nuclear receptor ligand inducers of isoflavone production in)

IT Onium compounds

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (tetrazolium, redox dyes; enhancer of nuclear
 receptor ligand inducers of isoflavone production in plants)

IT 9012-72-0, glucan
 RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (Phytophthora sojae cell wall, fragment; enhancer of nuclear receptor
 ligand inducers of isoflavone production in plants)

IT 11121-48-5, Rose bengal 14333-18-7,
 Orthovanadate
 RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (enhancer of nuclear receptor ligand inducers of isoflavone production in
 plants)

IT 50-02-2, Dexamethasone 50-23-7, Hydrocortisone 50-27-1, Estriol
 50-28-2, 17 β -Estradiol, biological studies 52-39-1, Aldosterone
 53-06-5, Cortisone 53-16-7, Estrone, biological studies 53-41-8,
 Androsterone 56-53-1, Diethylstilbestrol 57-83-0, Progesterone,
 biological studies 57-87-4, Ergosterol 60-33-3, Linoleic acid,
 biological studies 84-16-2, Hexestrol 84-17-3, Dienestrol 112-79-8,
 Elaidic acid 112-80-1, Oleic acid, biological studies 145-13-1,
 Pregnenolone 446-72-0, Genistein 479-13-0, Coumesterol
 486-66-8, Daidzein 506-32-1, Arachidonic acid 593-39-5, Petroselinic
 acid 882-09-7, Clofibrilic acid 6217-54-5 10417-94-4,
 Eicosapentaenoic acid 17413-79-5, 2-(2-Chlorophenoxy)-2-
 methylpropionic acid 17924-92-4, Zearalenone 52214-84-3,
 Ciprofibrate
 RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (nuclear receptor ligand inducer of isoflavone production in
 plants)

IT 446-72-0D, Genistein, conjugates 485-72-3D, Formononetin, aglycon
 486-66-8D, Daidzein, aglycon 574-12-9, isoflavone
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
 (Biological study); PROC (Process)
 (nuclear receptor ligand inducers of isoflavone production in plants)

IT 11121-48-5, Rose bengal
 RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (enhancer of nuclear receptor ligand inducers of isoflavone production in
 plants)

RN 11121-48-5 HCAPLUS
 CN Rose Bengal (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

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L67 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1999:536657 HCAPLUS
 DN 131:281336
 ED Entered STN: 27 Aug 1999
 TI Phosphorylation of peroxisome proliferator-activated receptor α in
 rat fao cells and stimulation by ciprofibrate
 AU Passilly, Patricia; Schohn, Herve; Jannin, Brigitte; Malki, Mustapha
 Cherkaoui; Boscoboinik, Daniel; Dauca, Michel; Latruffe, Norbert
 CS Universite de Bourgogne, Laboratoire de Biologie Moleculaire et
 Cellulaire, Faculte des Sciences, Dijon, 21000, Fr.
 SO Biochemical Pharmacology (1999), 58(6), 1001-1008
 CODEN: BCPA6; ISSN: 0006-2952
 PB Elsevier Science Inc.
 DT Journal
 LA English
 CC 1-10 (Pharmacology)
 AB The basic mechanism(s) by which peroxisome proliferators activate
 peroxisome proliferator-activated receptors (PPARs) is (are) not yet fully
 understood. Given the diversity of peroxisome proliferators, several
 hypotheses of activation have been proposed. Among them is the notion
 that peroxisome proliferators could activate PPARs by changing their

phosphorylation status. In fact, it is well known that several members of the nuclear hormone receptor superfamily are regulated by phosphorylation. In this report, we show that the rat Fao hepatic-derived cell line, known to respond to peroxisome proliferators, exhibited a high content of PPAR α . Alkaline phosphatase treatment of Fao cell lysate as well as immunopptn. of PPAR α from cells prelabeled with [32P] orthophosphate clearly showed that PPAR α is indeed a phosphoprotein in vivo. Moreover, treatment of rat Fao cells with ciprofibrate, a peroxisome proliferator, increased the phosphorylation level of the PPAR α . In addition, treatment of Fao cells with phosphatase inhibitors (okadaic acid and sodium orthovanadate) decreased the activity of ciprofibrate-induced peroxisomal acyl-CoA oxidase, an enzyme encoded by a PPAR α target gene. Our results suggest that the gene expression controlled by peroxisome proliferators could be mediated in part by a modulation of the PPAR α effect via a modification of the phosphorylation level of this receptor.

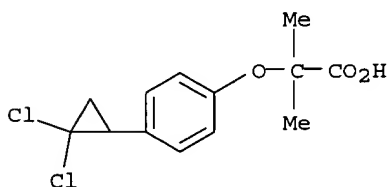
ST peroxisome proliferator ciprofibrate PPAR phosphorylation liver
 IT Animal cell line
 (Fao; phosphorylation of peroxisome proliferator-activated receptor
 α in rat fao cells and stimulation by ciprofibrate)
 IT Gene, animal
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
 (Biological study); PROC (Process)
 (for PPAR α ; phosphorylation of peroxisome proliferator-activated
 receptor α in rat fao cells and stimulation by ciprofibrate)
 IT Hypolipemic agents
 Liver
 Peroxisome proliferators
 (phosphorylation of peroxisome proliferator-activated receptor α
 in rat fao cells and stimulation by ciprofibrate)
 IT Phosphorylation, biological
 (protein; phosphorylation of peroxisome proliferator-activated receptor
 α in rat fao cells and stimulation by ciprofibrate)
 IT Peroxisome proliferator-activated receptors
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
 (Biological study); PROC (Process)
 (α ; phosphorylation of peroxisome proliferator-activated receptor
 α in rat fao cells and stimulation by ciprofibrate)
 IT 52214-84-3, Ciprofibrate
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological
 study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
 (Uses)
 (phosphorylation of peroxisome proliferator-activated receptor α
 in rat fao cells and stimulation by ciprofibrate)
 IT 61116-22-1, Acyl-CoA oxidase
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
 (Biological study); PROC (Process)
 (phosphorylation of peroxisome proliferator-activated receptor α
 in rat fao cells and stimulation by ciprofibrate)

RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD

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- IT 52214-84-3, Ciprofibrate
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (phosphorylation of peroxisome proliferator-activated receptor α in rat fao cells and stimulation by ciprofibrate)
- RN 52214-84-3 HCAPLUS
 CN Propanoic acid, 2-[4-(2,2-dichlorocyclopropyl)phenoxy]-2-methyl- (9CI)
 (CA INDEX NAME)



- L67 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1992:400277 HCAPLUS
 DN 117:277
 ED Entered STN: 11 Jul 1992
 TI Mechanism of allergic cross-reactions. I. Multispecific binding of ligands to a mouse monoclonal anti-DNP IgE antibody
 AU Varga, Janos M.; Kalchschmid, Gertrud; Klein, Georg F.; Fritsch, Peter
 CS Dep. Dermatol., Univ. Innsbruck, Innsbruck, 6020, Austria
 SO Molecular Immunology (1991), 28(6), 641-54
 CODEN: MOIMD5; ISSN: 0161-5890
 DT Journal
 LA English
 CC 1-3 (Pharmacology)
 Section cross-reference(s): 4, 15
- AB A recently developed solid-phase binding assay was used to investigate the specificity of ligand binding to a mouse monoclonal anti-dinitrophenyl IgE (I). All DNP-amino acids, that were tested inhibited the binding of the radio-labeled I to DNP covalently attached to polystyrene microplates; however, the concentration for 50% inhibition varied within four orders of magnitude, DNP-L-serine being the most and DNP-L-proline the least potent inhibitor. In addition to DNP analogs, a large number of drugs and other

compds. were tested for their ability to compete with DNP for the binding site of I. At the concentration used for screening, 59% of compds. had no significant inhibition; 19% inhibited the binding of I more than 50%. Several families of compds. (tetracyclines, polymyxins, phenothiazines, salicylates, and quinones) that were effective competitors were found. Within these families, changes in the functional groups attached to the family stem had major effects on the affinity of ligand binding. The occurrence frequencies of interactions of ligands with I is in good agreement with the semi-empirical model for multispecific antibody-ligand interactions.

- ST antibody drug interaction cross reaction; allergy immediate hypersensitivity antibody ligand; IgE ligand cross reaction
- IT Antibiotics
Chemicals
Pharmaceuticals
Ligands
Quinones
Sulfonamides
RL: BIOL (Biological study)
(antibodies to dinitrophenol binding by, allergic cross-reaction mechanism in relation to)
- IT Hemoglobins
Keratins
Saponins
RL: BIOL (Biological study)
(binding of, to anti-dinitrophenol monoclonal antibody, allergic cross-reaction mechanism in relation to)
- IT Immunoglobulins
RL: BIOL (Biological study)
(E, monoclonal, to dinitrophenol, drugs and other chemical binding to, allergic cross-reaction mechanism in relation to)
- IT Molecular structure-biological activity relationship
(antibody-binding, allergic cross-reaction, of drugs and other chems.)
- IT Amino acids, biological studies
RL: BIOL (Biological study)
(dinitrophenyl, antibodies to dinitrophenol binding by, allergic cross-reaction mechanism in relation to)
- IT Allergy
(immediate hypersensitivity, mechanism of, antibody to dinitrophenol binding by drugs and other chems. in relation to)
- IT 60-54-8D, derivs. 69-72-7D, Salicylic acid, derivs. 92-84-2D, Phenothiazine, derivs. 1406-11-7D, Polymyxin, derivs.
RL: BIOL (Biological study)
(antibodies to dinitrophenol binding by, allergic cross-reaction mechanism in relation to)
- IT 50-02-2 50-10-2 50-12-4, Mesantoin 50-18-0, Endoxan 50-29-3, DDT, biological studies 50-33-9, Phebumine, biological studies 50-34-0 50-44-2, Mercaptopurine 50-65-7 50-70-4, Sorbit, biological studies 51-05-8, Procaine hydrochloride 51-18-3, Tretamin 51-21-8, 5-Fluoro-uracil 51-41-2, Levarterenol 51-67-2 51-83-2 52-01-7, Spironolactone 52-49-3 52-62-0 52-86-8, Haloperidol 53-43-0 53-60-1, Promazine hydrochloride 53-86-1 54-03-5, Ustimon 54-31-9, Furosemid 54-32-0, Opilon 54-36-4, Metyrapone 54-42-2, Idoxuridine 54-49-9 54-64-8, Thimerosal 54-71-7, Pilocarpine hydrochloride 54-85-3 54-91-1, Pipobroman 54-92-2, Iproniazide 54-96-6, 3,4-Pyridinediamine 55-03-8, Sodium thyroxine 55-06-1 55-10-7 55-16-3, Scopolamine hydrochloride 55-22-1, Isonicotinic acid, biological studies 55-55-0, Metol 55-65-2 55-92-5, Methacholine 55-97-0 56-38-2, Parathion 56-55-3, Benz[a]anthracene 56-92-8 57-48-7, Levulose, biological studies 57-50-1, Saccharose, biological studies 57-53-4 57-64-7 57-66-9, Probenecid 57-83-0, Proluton, biological studies 57-87-4 57-94-3 58-14-0, Pyrimethamine 58-15-1, Pyramidon 58-20-8, Testosterone-cyclopentylpropionate 58-27-5, Menadione 58-28-6, Desipramine hydrochloride 58-32-2, Persantin 58-38-8, Prochlorperazine 58-39-9, Perphenazine 58-46-8 58-54-8 58-55-9, Theophyllin, biological studies 58-73-1, Diphenhydramine

58-74-2 58-86-6, D(+)-Xylose, biological studies 59-05-2, Methotrexate
 59-06-3, Ethopabate 59-32-5, Synopen 59-33-6, Pyrillamine maleate
 59-43-8, Thiamine, biological studies 59-47-2 59-63-2, Marplan
 59-66-5, Diamox 59-97-2 59-99-4, Prostigmine 60-56-0, Methimazole
 60-57-1, Dieltrin 60-80-0 60-81-1 60-89-9, Pacatal 60-99-1,
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 61-68-7 61-96-1, Nordefrin hydrochloride 62-13-5 62-44-2,
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 63-74-1, Sulfanilamide 63-92-3, Phenoxybenzamine hydrochloride
 64-10-8, Phenylurea 64-47-1, Physostigmine sulfate 64-55-1, Mebutamat
 64-77-7, Tolbutamide 65-19-0 65-28-1 65-29-2 65-45-2, Salicylamide
 65-49-6, PAS 65-85-0, Benzoic acid, biological studies 65-86-1, Orotic
 acid 66-22-8, Uracil, biological studies 66-76-2 67-45-8, Furoxon
 67-92-5, Dicycloverin hydrochloride 67-96-9 68-11-1, Thioglycolic
 acid, biological studies 68-91-7 68-94-0, Hypoxanthine 69-14-7,
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 69-79-4, Maltose 69-89-6, Xanthine 69-96-5 70-30-4 71-82-9
 72-14-0, Sulfathiazol 72-54-8 72-80-0, Sterosan 76-09-5 76-20-0
 76-57-3 76-61-9, Thymolblue 76-62-0 76-78-8 76-83-5 76-84-6,
 Triphenylcarbinol 77-03-2, Sedulon 77-04-3, 3,3-Diethyl-2,4-
 dioxotetrahydropyridine 77-09-8 77-21-4, Doriden 77-41-8 77-67-8
 78-11-5 78-28-4 79-55-0 79-93-6, Phenaglycodol 80-49-9 80-69-3,
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 Dehydrocholic acid 81-54-9 81-60-7 81-61-8 81-89-0 81-92-5,
 Egmol 82-66-6, Diphenadione 82-71-3 83-12-5, 2-Phenyl-1,3-indandione
 83-34-1, 3-Methylindole 83-44-3, Desoxycholic acid 83-46-5 83-48-7
 83-63-6, Pellidol 83-70-5, Vitamin K5 83-73-8, Diiodohydroxyquinoline
 83-75-0, Euquinine 83-87-4 83-88-5, Lactoflavine, biological studies
 84-02-6 84-11-7, Phenanthraquinone 84-12-8, Entobex 84-88-8,
 8-Hydroxyquinoline-5-sulfonic acid 85-01-8, Phenanthrene, biological
 studies 86-30-6, N-Nitrosodiphenylamine 86-34-0 86-48-6,
 1-Hydroxy-2-naphthoic acid 86-55-5, 1-Naphthalenecarboxylic acid
 86-73-7, Fluorene 86-78-2 86-86-2, 1-Naphthylacetamide 87-41-2,
 Phthalide 87-51-4, 1H-Indole-3-acetic acid, biological studies 87-52-5
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 Homophthalic acid 89-68-9, Chlorthymol 89-86-1 90-01-7, Saligenin
 90-05-1 90-15-3, 1-Naphthalenol 90-30-2 90-33-5,
 4-Methyl-umbelliferone 90-43-7, [1,1'-Biphenyl]-2-ol 90-46-0,
 Xanthidol 90-47-1, Xanthone 90-50-6, 3,4,5-Trimethoxycinnamic acid
 90-64-2, Amygdalic acid 90-82-4 90-85-7, Benzylephedrine 90-94-8
 91-01-0, Diphenylcarbinol 91-10-1 91-15-6, 1,2-Benzenedicarbonitrile
 91-20-3, Naphthalene, biological studies 91-40-7 91-56-5, Isatin
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 92-62-6, Proflavine 92-69-3, [1,1'-Biphenyl]-4-ol 92-71-7, PPO
 92-77-3 92-88-6, [1,1'-Biphenyl]-4,4'-diol 93-04-9 93-09-4,
 2-Naphthalenecarboxylic acid 93-14-1 93-18-5, Nerolin II 93-35-6,
 Umbelliferon 93-42-5, Thionalid 93-44-7 93-56-1, Phenylethylene
 glycol 93-60-7 94-13-3, Propyl-4-hydroxy benzoate 94-14-4, Cycloform
 RL: BIOL (Biological study)

(binding of, to anti-dinitrophenol monoclonal antibody, allergic
 cross-reaction mechanism in relation to)

IT 94-15-5, Larocaine 94-18-8, Nipabenzyl 94-19-9, Globucid 94-62-2,
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 97-65-4, biological studies 98-71-5 98-79-3, 5-Oxo-L-proline
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 biological studies 99-14-9, Tricarballic acid 99-20-7 99-26-3,
 Dermatol 99-50-3, 3,4-Dihydroxybenzoic acid 99-53-6,
 2-Methyl-4-nitrophenol 99-76-3, Nipagin 99-93-4 99-96-7, biological
 studies 100-88-9 100-97-0, biological studies 101-31-5 101-38-2
 101-99-5, Phenylurethane 102-08-9, Diphenylthiourea 102-98-7,

Phenylmercuryborate 103-01-5, N-Phenylglycine 103-03-7,
 1-Phenylsemicarbazide 103-16-2, Monobenzon 103-41-3, Cinnamic acid
 benzylester 103-82-2, Phenylacetic acid, biological studies 103-85-5,
 Phenylthiourea 103-90-2 104-15-4, biological studies 105-67-9
 106-44-5, biological studies 106-48-9 106-49-0, p-Toluidine,
 biological studies 106-50-3, 1,4-Benzenediamine, biological studies
 107-97-1, Sarcosine 108-39-4, m-Cresole, biological studies 108-45-2,
 1,3-Benzenediamine, biological studies 108-73-6, Phloroglucine
 109-57-9, Thiosinamine 110-44-1 110-85-0, Piperazine, biological
 studies 111-20-6, Decanedioic acid, biological studies 112-47-0,
 1,10-Decanediol 112-72-1, Tetradecanol 112-86-7 113-22-4,
 Styptanon 113-52-0 113-59-7, Taractan 114-80-7 114-86-3,
 Phenformin 115-24-2, Sulfonal 115-33-3 115-77-5, biological studies
 116-38-1, Edrophonium-chloride 117-10-2, Istizin 117-34-0,
 Diphenylacetic acid 117-89-5, Trifluoperazin 118-41-2,
 3,4,5-Trimethoxybenzoic acid, biological studies 118-55-8, Salol
 118-57-0, Salophen 118-76-3 118-79-6 118-82-1 119-39-1,
 1(2H)-Phthalazinone 119-58-4 119-90-4 119-91-5, 2,2'-Biquinoline
 119-93-7 120-14-9, Veratrumaldehyde 120-18-3, 2-Naphthalenesulfonic
 acid 120-22-9, p-Nitrosodiethylaniline 120-46-7, Dibenzoylmethane
 120-57-0, Heliotropine 120-72-9, 1H-Indole, biological studies
 120-78-5 120-97-8 121-57-3 121-82-4, Hexogen 122-25-8 122-39-4,
 Diphenylamine, biological studies 122-59-8 122-66-7 122-69-0,
 Styracin 123-31-9, Hydroquinone, biological studies 123-47-7,
 Endoiodin 124-43-6, Ortizon 124-76-5, Isoborneol 124-87-8 125-13-3
 125-33-7, Primidone 125-46-2 125-51-9 125-52-0, Oxyphencyclimine
 hydrochloride 125-64-4, Noludar 125-85-9, Parpanit 125-99-5,
 Pathilon 126-02-3, Cycrimine hydrochloride 126-27-2, Oxethazaine
 126-52-3, Ethinamate 126-81-8, Dimedon 127-48-0, Tridione 128-13-2
 129-00-0, Pyrene, biological studies 129-20-4, Tanderil 129-77-1
 130-15-4, 1,4-Naphthalenedione 130-61-0 131-01-1, Deserpidine
 131-28-2 131-49-7, Angiografin 131-73-7 132-18-3 132-53-6
 132-86-5, 1,3-Naphthalenediol 133-10-8 133-32-4, 1H-Indole-3-butanolic
 acid 133-67-5, Trichlormethiazide 134-31-6 134-71-4, Ephetonin
 135-02-4 135-19-3, 2-Naphthalenol, biological studies 135-31-9
 135-44-4 135-88-6 136-38-9 136-40-3, Phenazopyridine hydrochloride
 136-47-0 136-72-1, Piperic acid 136-77-6, 4-Hexylresorcine 136-82-3,
 Metycaine 137-26-8, Thiram 137-58-6, Xylocaine 137-86-0 138-14-7,
 Desferal 138-41-0, Benzoic acid-p-sulfamide 139-33-3, Komplexon III
 139-62-8 140-22-7, Diphenylcarbazine 140-64-7 141-82-2, Malonic
 acid, biological studies 142-63-2, Piperazine hexahydrate 143-66-8
 143-67-9, Vinblastine sulfate 143-92-0, Tropenzilium bromide 144-75-2,
 Diasone 146-22-5, Mogadon 146-48-5, Quebrachin 146-56-5 147-24-0,
 Diphenhydramine hydrochloride 147-93-3, Thiosalicylic acid 147-94-4
 148-24-3, 8-Quinololinol, biological studies 148-72-1, Pilocarpine nitrate
 148-79-8, Thiabendazole 149-30-4, 2-Mercaptobenzthiazole 149-91-7,
 Gallic acid, biological studies 150-69-6 150-76-5,
 Hydroquinonemonomethyl ether 150-78-7 151-83-7, Methohexital
 152-02-3 152-11-4, Isoptin hydrochloride 152-72-7, Sintrom 154-69-8,
 Pyribenzamine hydrochloride 155-09-9 155-41-9 191-48-0,
 Diacenaphtho[1,2-j:1',2'-l]fluoranthene 206-44-0, Fluoranthene
 217-59-4, Triphenylene 288-32-4, Imidazole, biological studies
 288-47-1, Thiazole 298-81-7, Meladinine 298-96-4, Triphenyl
 tetrazolium chloride 299-39-8 299-42-3 300-48-1 302-70-5,
 Mitomen 302-79-4, Tretinoin 303-25-3, Cyclizine hydrochloride
 303-69-5, Dominal 304-84-7, Etamivan 306-03-6 306-07-0 306-19-4
 306-21-8, Paredrine hydrobromide 314-03-4 315-80-0, Dibenzepin
 hydrochloride 317-34-0 318-98-9, Propranolol hydrochloride 319-89-1,
 Tetrahydroxyquinone 320-77-4 331-39-5 339-43-5 341-70-8
 350-12-9, Sulbentin 357-66-4, Spirilene 360-68-9, Koprosterin
 364-62-5, Metoclopramide 365-26-4 382-67-2 389-08-2, Nalidixic acid
 390-64-7, Segontin 396-01-0 434-13-9 435-97-2, Marcoumar 439-14-5,
 Valium 443-48-1, Metronidazole 447-05-2, Pyridoxine phosphate
 452-86-8 456-59-7, Cyclandelate 458-24-2, Fenfluramine 466-06-8,
 Proscillaridin 466-09-1, Uzarigenin 471-47-6, Oxamidic acid
 475-25-2, Hematine 477-93-0, Dimethoxanate 479-18-5, Isophyllen

479-27-6, 1,8-Naphthalenediamine 479-92-5 480-68-2 481-06-1,
Santonin 481-85-6, 2-Methyl-1,4-naphthohydroquinone 482-05-3, Diphenic
acid

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IT 482-68-8, Sarpagan-10,17-diol 482-74-6 483-84-1, Flavianic acid
484-11-7, Neocuproin 484-23-1, Nepresol 485-34-7, Novatophan
486-25-9, Fluorenone 486-67-9, Mersalyl acid 486-79-3, Dipyroctyl
487-53-6, Oxyprocaine 488-41-5 489-98-5, Picramide 490-79-9,
2,5-Dihydroxybenzoic acid 490-91-5, Thymoquinone 490-98-2, Salicaine
492-22-8, 9H-Thioxanthen-9-one 492-41-1 492-70-6 493-52-7, Methyl
Red 493-80-1, Luvistin 495-69-2, Hippuric acid 497-25-6,
2-Oxazolidinone 497-59-6, Meconic acid 497-75-6 498-23-7, Citraconic
acid 498-24-8, Mesaconic acid 500-38-9 500-89-0, Thiambutosin
501-52-0, Benzenepropanoic acid 501-65-5, Tolan 501-81-5,
3-Pyridylacetic acid 504-15-4, Orcin 505-48-6, Suberic acid
505-54-4, Hexadecanedioic acid 510-74-7, Spiramide 511-13-7, Detigon
511-46-6, Keithon 512-69-6, Raffinose 515-64-0, Elkosin 515-96-8,
Semioxamazide 516-95-0 517-28-2, Hematoxyline 519-05-1, Opianic acid
519-32-4 519-37-9 519-41-5 519-73-3, Triphenyl methane 520-07-0
520-26-3, Hesperidine 521-74-4 522-12-3 522-23-6, Metofenazate
difumurate 522-51-0 522-66-7, Hydroquinine 523-21-7 523-87-5
524-42-5, 1,2-Naphthoquinone 525-48-4 526-75-0 527-06-0,
D-glycero-D-galacto-Heptitol 528-21-2, Gallacetophenone 530-78-9
532-03-6, Methocarbamol 532-54-7 532-76-3, Hexylcaine hydrochloride
533-06-2 533-10-8 533-63-1, Iodival 533-73-3, 1,2,4-Benzenetriol
535-83-1 536-21-0, Norfenefrine 536-33-4, Iridozin 537-12-2
537-26-8 537-45-1 538-02-3, Cyclopentamine hydrochloride 538-24-9,
Trilaurin 538-32-9 538-56-7 538-58-9 538-62-5, Diphenylcarbazone
539-08-2 539-09-3, Elbon 539-21-9, Iversal 539-47-9 543-15-7,
Heptaminol hydrochloride 547-57-9 547-58-0, Methyloange 548-00-5,
Tromexan 548-35-6 548-57-2, Miracil D 548-73-2, Dehydrobenzperidol
550-70-9, Triprolidine hydrochloride 550-74-3 552-22-7, Thymoliodide
552-46-5, α -Naphthylamine hydrochloride 552-94-3, Diplosal
553-06-0 553-30-0, Proflavinhemisulfate 554-24-5, Phenobutiodil
554-57-4, Methazolamide 555-28-2, Eucaine hydrochloride 555-30-6,
Methyl dopa 555-68-0, m-Nitrocinnamic acid 556-50-3 561-20-6
562-09-4, Systral 562-10-7, Doxylamine 569-51-7, Hemimellitic acid
569-59-5 569-61-9, Pararosaniline 571-60-8, 1,4-Naphthalenediol
575-44-0, 1,6-Naphthalenediol 576-68-1, Mannomustin 578-19-8,
Diaspirin 578-94-9 579-10-2, Exalgin 579-23-7, Cyclovalone
579-75-9, Salicylic acid methylether 580-16-5, 6-Quinolinol 581-43-1,
2,6-Naphthalenediol 582-17-2, 2,7-Naphthalenediol 588-59-0, Stilbene
590-63-6, Urecholine chloride 594-14-9 599-04-2 603-00-9 603-50-9,
Dulcolax 603-52-1, Diphenylurethane 603-63-4, Hypnal 603-64-5
604-75-1, Oxazepam 606-90-6, Piprinhydrate 607-00-1 608-59-3,
Gluconate 608-66-2, Melampyrit 611-36-9, 4-Quinolinol 611-71-2
612-41-9, o-Nitrocinnamic acid 612-52-2 613-03-6 613-12-7
613-31-0, Dihydroanthracene 614-33-5 620-40-6, Tribenzylamine
620-99-5, Holocaine hydrochloride 621-06-7, Phenylacetanilide 621-08-9
621-37-4 621-71-6, Tricaprין 621-82-9, Cinnamic acid, biological
studies 622-03-7, Diphenylthiocarbazine 622-64-0 626-64-2,
4-Pyridinol 632-25-7, o-Sulfobenzoic acid 635-41-6, Trimetozin
637-56-9, p-Phenetidine hydrochloride 637-58-1, Tronothane hydrochloride
644-26-8, Stovain 644-62-2 655-05-0, Thozalinone 673-31-4,
Phenprobamate 693-23-2, Decamethylenedicarboxylic acid 696-62-8
697-91-6 699-06-9 712-48-1 721-19-7, Methastyridone 729-99-7
738-70-5, Trimethoprim 739-71-9, Trimipramine 742-20-1,
Cyclopenthiiazide 749-02-0 749-13-3, Trifluoperidol 751-94-0
826-39-1, Mecamylamine hydrochloride 830-81-9, 1-Naphthylacetate
840-65-3 841-32-7, Diphenylpropylacetic acid 846-49-1, Lorazepam
846-50-4, Temazepam 848-75-9, Lormetazepam 852-19-7, Sulfapyrazole
853-34-9, Ketophenyl butazone 868-18-8 877-43-0, 2,6-Dimethylquinoline
890-98-2, Mandelic acidbenzylester 891-33-8, Tutocaine 894-71-3,
Nortriptyline hydrochloride 897-15-4, Dosulepin hydrochloride

909-39-7, Insidon 910-86-1 912-60-7, Narcotine hydrochloride
 933-67-5, 7-Methylindole 938-25-0, 1,2-Naphthalenediamine 943-17-9
 943-17-9, Effortil 953-26-4 956-48-9 957-51-7, Diphenamid
 958-93-0, Thenyldiamine hydrochloride 963-39-3, Demoxepam 964-52-3
 965-52-6, Nifuroxazide 967-80-6 969-33-5, Cyproheptadine hydrochloride
 977-79-7 982-43-4 985-13-7 1007-33-6 1011-54-7, trans-2-Methoxy
 cinnamic acid 1011-92-3, α -Cyano-cinnamic acid 1015-89-0,
 6(5H)-Phenanthridinone 1021-11-0 1059-28-5, Tussukal 1070-95-7,
 Guanoctine hydrochloride 1077-28-7, DL-Thioctic acid 1079-71-6,
 Octahydroanthracene 1082-57-1, Rhinogutt 1083-57-4 1088-92-2
 1094-08-2, Profenamine hydrochloride 1098-60-8 1115-70-4, Metformin
 hydrochloride 1142-42-3 1145-36-4, Felogen 1146-95-8, Gilutensin
 hydrochloride 1147-56-4, 1-(2-Thiazolylazo)-2-naphthol 1151-11-7,
 Solu-Biloptin 1155-49-3, Falicain 1156-19-0, Tolazamide 1172-18-5,
 Flurazepam dihydrochloride 1173-88-2, Stapenor 1176-03-0, Psicaine
 1176-08-5, Phenyltoloxamine citrate 1179-69-7, Torecan 1197-18-8,
 Tranexamic acid 1198-55-6 1199-77-5, α -Methyl-cinnamic acid

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IT 1211-28-5, Katovit 1212-72-2, Mephen-termine sulfate 1215-83-4,
 Silomat 1218-35-5 1225-55-4 1228-19-9, Glypinamide 1229-29-4,
 Doxepin hydrochloride 1229-69-2 1240-15-9, Propiomazine hydrochloride
 1248-42-6 1256-01-5, Pasaden 1323-64-4 1391-57-7, Filmaron
 1400-62-0, Orcein 1407-14-3, Helenine 1421-86-9, Strychnine
 hydrochloride 1480-19-9, Fluanisone 1491-41-4, Maretin 1508-27-6
 1508-75-4 1508-76-5, Procyclidine hydrochloride 1582-09-8,
 Trifluraline 1596-70-9 1622-62-4, Flunitrazepam 1622-79-3
 1639-60-7 1641-74-3, Nicametate citrate 1642-54-2 1674-48-2
 1722-62-9 1740-22-3, Surexin 1764-85-8, Epithiazide 1786-81-8,
 Prilocaine hydrochloride 1837-57-6, Rivanol 1841-19-6, Fluspirilene
 1847-63-8, Nafoxidine hydrochloride 1867-66-9, Ketamine hydrochloride
 1893-33-0 1944-12-3, Fenoterol hydrobromide 1975-50-4,
 2-Methyl-3-nitro-benzoic acid 2002-29-1 2043-43-8, Lactamide
 2053-26-1, Papaverine sulfate 2062-78-4 2081-65-4 2135-17-3,
 Flumethason 2139-47-1 2181-22-8 2192-20-3 2210-63-1,
 Monophenylbutazone 2217-44-9 2218-94-2, Nitron 2243-62-1,
 1,5-Naphthalenediamine 2259-96-3, Cyclothiazide 2295-31-0,
 2,4-Thiazolidinedione 2307-81-5, Quiloflex 2313-87-3, Ethoxazene
 hydrochloride 2315-02-8 2321-07-5 2324-94-9 2347-80-0 2348-17-6
 2350-32-5, Stadacaine 2398-96-1, Tonoftal 2435-53-2 2444-46-4
 2447-57-6, Fanasil 2448-68-2 2451-01-6, Terpinhydrate 2465-59-0,
 Oxypurinol 2525-09-9 2530-97-4 2572-61-4 2574-78-9 2606-93-1
 2608-24-4 2622-26-6, Periciazine 2691-46-5, Spasmo-Papamid
 2709-56-0, Flupenthixol 2773-92-4, Quotane hydrochloride 2784-55-6
 2810-69-7 2825-60-7, Formocortal 2870-71-5, Tropin 2898-12-6,
 Medazepam 2955-38-6, Prazepam 2961-04-8 2987-16-8 3058-01-3
 3069-07-6, Tetraacetyl hydrazine 3093-35-4, Halcinonide 3112-31-0,
 1H-Pyrazole-3,5-dicarboxylic acid 3115-05-7 3254-89-5, Diphenidol
 hydrochloride 3269-83-8 3339-11-5, Tolpropamine hydrochloride
 3403-42-7, Methopromazine maleate 3413-58-9, Optochin hydrochloride
 3416-26-0, Lidoflazine 3453-83-6 3458-28-4, D(+)Mannose 3459-20-9,
 Redul 3546-03-0 3546-41-6 3605-01-4, Piribedil 3614-30-0
 3614-69-5 3615-41-6, Rhamnose 3682-32-4, 2-Nitroso-1-naphthol-4-
 sulfonic acid 3685-84-5, Meclophenoxate hydrochloride 3688-85-5,
 Diapamide 3689-50-7, Oxomemazin 3717-88-2 3731-59-7 3735-45-3,
 Monzal 3735-90-8, Fencarbamide 3759-07-7 3772-76-7, Methofadin
 3811-56-1, Surfen 3818-88-0, Tricyclamol chloride 3829-86-5
 3871-82-7, Methylperidol hydrochloride 3937-56-2, 1,9-Nonanediol
 3963-81-3, Trigemin 4003-94-5, 4-Nitrostilbene 4044-65-9,
 1,4-Phenylenediisothiocyanate 4247-16-9, Methylglutamine 4330-99-8
 4394-00-7 4427-56-9, Isothymol 4546-48-9 4551-59-1 4582-18-7,
 Endomid 4682-36-4 4724-59-8 4779-94-6, Novadral hydrochloride
 4839-46-7, 3,3-Dimethylglutaric acid 4991-65-5, Tioxolon 5034-76-4,
 Indoxole 5041-09-8, Isobutylamine hydrochloride 5076-82-4, Sarcosine
 anhydride 5144-52-5 5255-68-5 5322-53-2, Oxiperomide 5370-01-4

5416-45-5, Phenylldiphenylcarbamate 5428-54-6, 2-Methyl-5-nitrophenol
 5437-38-7, 3-Methyl-2-nitro-benzoic acid 5449-84-3 5536-17-4
 5579-13-5 5585-60-4 5588-29-4, Fenmetramide 5588-31-8, Imidoline
 hydrochloride 5591-29-7, Etafedrine hydrochloride 5591-45-7,
 Thiothixene 5667-46-9, Dioxyline phosphate 5716-20-1, Vasculat
 5870-29-1, Cyclopentolate hydrochloride 5874-97-5 5875-06-9
 5936-29-8 5969-39-1 5987-82-6, Novesin 6027-28-7, Hostacaine
 6028-35-9 6038-78-4 6056-11-7, Selvigon 6114-26-7, Veritol sulfate
 6138-47-2 6153-33-9 6159-56-4 6164-87-0, Ronicol 6190-43-8,
 Helmitol 6192-92-3 6202-05-7, Cyclomethycaine sulfate 6202-23-9,
 Cyclobenzaprine hydrochloride 6217-24-9 6284-40-8, Meglumin
 6411-75-2 6452-71-7 6493-05-6, 3,7-Dimethyl-1-(5-oxohexyl)xanthine
 6506-37-2, Nimorazol 6521-30-8 6536-18-1 6556-11-2, Inositol
 nicotinate 6575-24-2 6673-35-4, Practolol 6700-56-7, Ethoheptazine
 citrate 6724-53-4, Perhexiline maleate 7008-15-3 7009-43-0
 7021-09-2, Methoxy-phenylacetic acid 7085-55-4, Troxerutin 7125-73-7,
 Flumetramide 7195-27-9, Mefrusid 7199-29-3, Cyheptamide 7210-92-6,
 Tolycaine hydrochloride 7242-04-8, Pentaacetyl gitoxin 7270-12-4,
 Resotren 7297-25-8 7413-36-7, Nifenalol 7414-95-1 7491-74-9,
 Piracetam 7517-19-3, L-Leucine methyl ester hydrochloride 7601-55-0,
 Metubine iodide 8002-89-9 8006-08-4, Ergotoxine 8015-17-6,
 Metrotonin 8015-18-7, Veramon 8064-60-6, Primulin 9001-22-3, Emulsin
 9002-92-0 9004-53-9, Dextrin 9005-79-2, Glycogen, biological studies
 9005-80-5, Inulin 10040-45-6 10176-39-3 10238-21-8 10347-81-6
 10402-53-6 10405-02-4 10539-19-2, Eupaverin 10563-70-9, Melitracen
 hydrochloride 10592-03-7, Vincamine hydrochloride 11014-59-8,
 Lanatoside 11024-24-1 12002-15-2, Sapamine 12041-92-8,
 Hexyltheobromine 12694-25-6, Bi-9H-fluorene 13055-82-8, Reproterol
 hydrochloride 13422-16-7, Triflocin 13472-79-2 13492-01-8
 13523-86-9, Pindolol 13636-10-7 13636-18-5 13665-88-8, Mopidamol
 13900-17-9

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IT 13977-28-1 14198-59-5 14222-60-7, Ektebin 14255-87-9, Parbendazole
 14293-44-8 14516-56-4 14538-56-8, Piperazine phosphate 14543-76-1
 14698-29-4, Oxolinic acid 14759-06-9 15307-79-6, Voltaren
 15351-13-0, Nicofuranose 15402-76-3 15537-73-2, Silubin 15585-38-3
 15676-16-1, Sulpiride 15687-27-1, Ibuprofen 15825-70-4 15876-67-2
 16110-98-8, Phenyl maleic acid 16662-46-7, Gallopamil hydrochloride
 16773-42-5, Ornidazole 16994-56-2 17088-72-1 17226-75-4 17273-86-8
 17297-82-4 17407-37-3, DL- α -Tocopherol succinate 17509-71-6
 17560-51-9, Metolazone 17692-39-6 17892-25-0 18174-58-8 18559-94-9
 18760-80-0, Methylephedrine hydrochloride 18869-73-3, Triacetyl
 diphenolisatin 19188-90-0 19237-84-4, Prazosin hydrochloride
 19311-91-2 19387-91-8, Tinidazole 19562-30-2 19794-93-5, Trazodone
 20153-98-4 20231-81-6, Uzarin 20277-92-3, N,N-Diphenyl-guanidine
 20423-87-4 20432-64-8, Iprindole hydrochloride 20455-68-9,
 Dibenzylamine hydrochloride 20788-07-2, Terenol 20833-93-6
 21361-95-5 21498-08-8 21535-47-7, Mianserine hydrochloride
 21721-92-6 21738-42-1 21829-25-4, Nifedipine 22059-60-5,
 Disopyramide phosphate 22071-15-4, Ketoprofen 22089-22-1, Trofosfamide
 22204-53-1, Naproxen 22232-55-9, Modatrop 22254-24-6,
 Ipratropiumbromide 22494-42-4, Diflunisal 22664-55-7, DL-Metipranolol
 22760-18-5 22832-87-7 22888-70-6 23031-32-5, Terbutalinsulfate
 23092-17-3, Halazepam 23111-34-4, Feclobuzone 23142-01-0 23239-51-2
 23288-49-5, Probulcol 23307-02-0 23327-57-3, Nefopam hydrochloride
 23488-38-2 23607-71-8 23694-81-7, Mepindolol 23873-81-6 23983-43-9
 24168-96-5 24169-02-6 24324-17-2, 9-Fluorenyl-methanol 24526-64-5,
 Nomifensin 24561-10-2, Piperocaine hydrochloride 24600-36-0, Fominoben
 hydrochloride 24815-24-5 25046-79-1, Glisoxepid 25167-82-2
 25167-84-4 25498-47-9, Saiodin 25717-80-0 25812-30-0, Gemfibrozil
 25953-17-7 25990-60-7, DL-Xylose 26020-55-3 26309-95-5,
 Pivampicillin hydrochloride 26598-44-7 26718-25-2 26864-56-2,
 Penfluridol 26921-17-5, Timolol-maleate 26983-52-8, Diphenol
 27479-32-9 27848-84-6 28346-70-5, Naphthalenediol 28738-34-3

29094-61-9, Glipizide 29110-48-3 29868-97-1 30440-92-7 30900-94-8
 30919-08-5 31329-57-4, Naftidrofuryl 31431-39-7, Mebendazole
 31566-31-1, Glycerin monostearate 31793-07-4, Pirprofen 31842-01-0,
 Indoprofen 31901-98-1, Naphthalenetetracarboxylic acid 32672-69-8
 32780-64-6, Labetalol hydrochloride 32972-46-6 33125-97-2, Etomidate
 33342-05-1 33396-37-1 33401-94-4, Pyrantel-tartrate 33402-03-8
 33996-33-7, Oxaceprol 34183-22-7, Propafenone hydrochloride
 34552-84-6, Isoxicam 34661-75-1 35306-33-3 35412-64-7 35604-67-2,
 Viloxazine hydrochloride 36236-67-6, Meclizine hydrochloride
 36282-47-0, Tramadol hydrochloride 36322-90-4, Piroxicam 36637-19-1,
 Etidocaine hydrochloride 37275-48-2, Dipyrindyl 37887-33-5
 38096-29-6, Pyridinediamine 38194-50-2, Sulindac 38304-91-5, Minoxidil
 38866-78-3 39379-48-1, Reten 39461-53-5, Pyrenedione 39562-70-4
 39568-70-2 40180-04-9 40507-80-0 41100-52-1, Memantine hydrochloride
 41340-25-4, Etodolac 41451-91-6, Erythromycine 41587-33-1
 41767-29-7, Fluocortinbutyl ester 41838-38-4 41847-77-2 41960-46-7
 42200-33-9, Nadolol 43218-56-0 49721-50-8 49746-00-1, Twiston
 50322-92-4 50679-08-8 50832-74-1, Nifurprazine hydrochloride
 50838-36-3 50926-65-3, Novalgin-quinine 51481-61-9 51703-77-6
 51931-66-9 51940-44-4, Pipemidic acid 51996-59-9 52432-72-1,
 Oxeladin citrate 52441-07-3, Parsol 52468-60-7 53179-11-6,
 Loperamide 53623-34-0 53663-23-3 53783-83-8, Tromantadine
 53859-10-2 53885-35-1, Ticlopidine hydrochloride 54024-22-5
 54504-70-0 54750-10-6, Isolevin 54767-75-8, Suloctidil 54812-66-7
 54965-24-1, Tamoxifen citrate 55031-26-0, Iodoeosine 55268-74-1,
 Praziquantel 55327-22-5 56050-03-4, Meclozamine citrate 56392-17-7,
 Metoprolol tartrate 57109-90-7 57808-66-9 58934-46-6, Lorcanide
 hydrochloride 59831-65-1, Halopemide 59954-01-7 60525-15-7
 60539-09-5 60607-34-3 61169-36-6 61229-67-2, Bromocresol red
 63250-48-6, Piprozoline 64019-93-8 65271-80-9 65277-42-1,
 Ketoconazole 65431-33-6, Trypaflavine 65923-65-1 66894-06-2
 69494-65-1, Migraenin 72762-00-6, 2-Pyridinol 73548-65-9, Veraethyl
 74217-46-2 74347-31-2 75507-68-5 77614-18-7 78361-94-1,
 Naphthoquinoline 81098-57-9 83943-60-6 98578-19-9 104700-83-6
 109893-47-2 139352-30-0, Pergalen 139369-53-2 139369-54-3
 139369-55-4 139369-56-5 139369-57-6 139369-58-7,
 2H-1-Benzopyran-3,3,4,4,5,7-hexol 139369-59-8 139369-60-1
 139369-61-2 139369-62-3 139369-64-5 139369-66-7 139369-67-8
 139369-68-9 139369-70-3 139369-71-4 139411-97-5

RL: BIOL (Biological study)

(binding of, to anti-dinitrophenol monoclonal antibody, allergic
 cross-reaction mechanism in relation to)

IT 139412-02-5 139412-03-6 139412-04-7 139465-28-4, Dipa-Vit B 15
 139465-72-8, Nipagin T 139466-02-7, Novanal 139466-06-1, Phenidol
 139556-82-4 139984-92-2

RL: BIOL (Biological study)

(binding of, to anti-dinitrophenol monoclonal antibody, allergic
 cross-reaction mechanism in relation to)

IT 50-33-9, Butazolidine, biological studies 50-41-9, Clomiphene citrate
 50-48-6, Amitriptylin 50-63-5, Chloroquin diphosphate 50-71-5, Alloxan
 50-78-2, Acetyl salicylic acid 50-85-1, m-Cresotinic acid 51-17-2,
 Benzimidazole 51-35-4, Hydroxyproline 51-55-8, Atropine, biological
 studies 51-66-1 51-84-3, biological studies 52-90-4, Cysteine,
 biological studies 54-31-9, Furosemide 54-84-2 54-95-5, Cardiazole
 55-56-1, Chlorhexidine 55-98-1, Busulphan 56-40-6, Glycine, biological
 studies 56-41-7, Alanine, biological studies 56-45-1, Serine,
 biological studies 56-55-3, Benzanthrane 56-72-4, Coumafes
 56-75-7, Chloramphenicol 56-85-9, Glutamine, biological studies
 56-87-1, L-Lysine, biological studies 56-89-3, Cystine, biological
 studies 57-37-4, Benactyzine hydrochloride 57-67-0, Sulfaguandine
 57-68-1, Sulfamethazine 57-92-1, Streptomycin, biological studies
 58-08-2, biological studies 58-15-1 58-33-3, Atosil 58-61-7,
 Adenosine, biological studies 58-94-6, Chlorthiazide 59-42-7
 59-49-4, 2(3H)-Benzoxazolone 60-18-4, L-Tyrosine, biological studies
 60-27-5 60-32-2 60-54-8 60-80-0, Antipyrin 61-12-1 61-33-6,
 Penicillin G, biological studies 61-72-3, Cloxacillin 61-75-6,

Bretyliumtosylate 61-90-5, Leucine, biological studies 61-94-9
 61-96-1, Corbasil 63-68-3, Methionine, biological studies 63-91-2,
 Phenylalanine, biological studies 64-77-7, Artosin 64-86-8, Colchicine
 64-95-9, Adiphenin 65-45-2, Salicylic acid amide 65-82-7,
 N-Acetylmethionine 66-81-9 67-03-8, Aneurine hydrochloride 67-52-7,
 2,4,6(1H,3H,5H)-Pyrimidinetrione 68-35-9, Sulfadiazin 68-41-7,
 D-Cycloserine 69-09-0, Chlorpromazine hydrochloride 69-27-2 69-53-4,
 Ampicillin 70-47-3, Asparagine, biological studies 71-00-1, Histidine,
 biological studies 72-18-4, Valine, biological studies 72-19-5,
 Threonine, biological studies 72-48-0, Alizarin 73-22-3, Tryptophane,
 biological studies 73-24-5, Adenine, biological studies 73-32-5,
 Isoleucine, biological studies 73-48-3, Benzylrodiuran 74-79-3,
 L-Arginine, biological studies 76-22-2 76-29-9 76-60-8,
 Bromocresolgreen 76-65-3, Amolanone 77-02-1, Allonal 77-36-1
 77-46-3, Acedapsone 77-65-6, Adalin 77-91-8 79-05-0, Propanamide
 79-57-2, Oxytetracycline 80-03-5 80-05-7, biological studies
 80-32-0, Vetsulid 80-77-3, Chlormezanone 80-97-7 81-61-8 81-64-1,
 Quinizarine 82-05-3, Benzanthrone 82-45-1, 1-Amino-anthraquinone
 82-54-2, Cotarnine 82-86-0, 1,2-Acenaphthylenedione 82-93-9 83-32-9,
 Acenaphthene 83-40-9, o-Cresotinic acid 84-65-1, Anthraquinone
 85-18-7 85-73-4, Taleudron 86-42-0 86-54-4 86-74-8, Carbazole
 87-08-1 87-32-1, N-Acetyl-DL-tryptophan 87-88-7 88-21-1 89-56-5,
 p-Cresotinic acid 90-64-2, Amygdalic acid 90-84-6 91-33-8 91-64-5,
 2H-1-Benzopyran-2-one 93-08-3 93-10-7, Quinaldinic acid 93-18-5
 93-44-7 94-09-7, Benzocaine 94-12-2 94-19-9 94-20-2,
 Chlorpropamide 94-25-7, Butesine 94-41-7 95-25-0, Chlorzoxazone
 95-55-6, o-Aminophenol 95-85-2 96-83-3, Iopanoic acid 97-59-6,
 Allantoin 98-37-3 98-50-0, Arsanilic acid 99-32-1, Chelidonic acid
 99-91-2 101-71-3 102-07-8, Carbanilide 103-12-8, Prontosil
 103-32-2, Benzylaniline 103-41-3 103-84-4, N-Acetylaniline 103-89-9
 103-90-2 104-06-3, Conteben 104-14-3 105-20-4, Betazole 106-34-3,
 Quinhydrone 106-51-4, p-Benzoquinone, biological studies 113-92-8,
 Chlorpheniramine maleate 114-83-0 115-39-9, Brom Phenol Blue
 115-51-5, Ambutoniumbromide 115-68-4, Irgamid 118-10-5 118-23-0,
 Ambodryl 118-75-2, Chloranil, biological studies 118-92-3,
 o-Aminobenzoic acid 119-53-9, Benzoin 119-61-9, Benzophenone,
 biological studies 120-32-1 120-34-3, Irgafen 121-25-5, Amprolium
 122-11-2, Madribon 122-80-5 124-04-9, Hexanedioic acid, biological
 studies 125-60-0, Baralgin-Amid 126-07-8 126-43-2 127-69-5,
 Sulfafurazol 127-79-7, Sulfamerazine 127-81-1, Salthion 130-16-5
 130-22-3 131-08-8 131-09-9 132-98-9, Isocillin 134-50-9,
 9-Aminoacridine hydrochloride 134-81-6, Benzil 134-85-0 136-95-8,
 2-Benzothiazolamine 137-08-6, Calcium-D-pantothenate 138-39-6,
 Mafenide 139-85-5 141-82-2, Propanedioic acid, biological studies
 143-37-3, Ethanimidamide 144-83-2 145-94-8, Chlorindanol 146-56-5
 147-24-0, Benadryl 147-55-7, Pheneticillin 147-85-3, Proline,
 biological studies 148-64-1 148-82-3, Melphalan 149-15-5, Butyn
 Sulfate 149-64-4 150-13-0, p-Aminobenzoic acid 150-69-6,
 p-Ethoxyphenylurea 152-47-6 153-61-7, Cefalotin 154-87-0,
 Cocarboxylase 154-97-2, Contrathion 208-96-8, Acenaphthylene
 218-01-9, Chrysene 243-42-5, Benzo[b]naphtho[2,3-d]furan 260-94-6,
 Acridine 298-46-4, 5H-Dibenz[b,f]azepine-5-carboxamide 298-57-7,
 Cinnarizine 303-81-1, Novobiocin 305-03-3, Chlorambucil 309-00-2,
 Aldrin 313-67-7, Aristolochic acid 315-30-0, Allopurinol 316-41-6,
 Berberinsulfate 334-48-5, Decanoic acid 346-18-9, Polythiazide
 370-81-0 437-74-1 441-38-3 446-86-6, Azathioprine 464-41-5
 466-49-9, Aspidospermin 467-22-1, Carbiphen hydrochloride 474-25-9
 481-74-3 488-82-4, D-Arabinitol 489-49-6, Cetrarin 497-76-7, Arbutin
 498-23-7, Citraconic acid 499-12-7, Aconitic acid 515-64-0,
 Sulfisomidine 519-87-9, Acetyldiphenylamine 520-77-4, Ethadione
 521-74-4, Broxyquinoline 526-08-9, Sulfaphenazole 529-65-7 530-43-8,
 Chloromycetin palmitate 531-75-9, Aesculin 537-05-3, Acoin 537-92-8
 543-24-8, N-Acetyl glycine

RL: BIOL (Biological study)

(binding of, to anti-dinitrophenol monoclonal antibody, allergic
cross-reaction mechanisms in relation to)

IT 545-93-7 547-44-4 550-81-2, Amopyroquin 551-27-9, Propicillin
 555-96-4 556-08-1, p-Acetaminobenzoic acid 564-25-0 569-84-6
 575-36-0 577-33-3, Anthrarobin 578-66-5, 8-Aminoquinoline 581-97-5
 588-68-1 590-46-5, Betaine.hydrochloride 591-07-1, N-Acetylurea
 591-08-2, N-Acetylthiourea 599-79-1 599-88-2, Sulfaperin 602-09-5,
 [1,1'-Binaphthalene]-2,2'-diol 606-04-2 613-78-5, Betol 616-91-1,
 N-Acetyl-L-cysteine 625-53-6, N-Ethylthiourea 630-55-7, Amphotropin
 636-54-4, Clopamide 637-32-1 637-49-0 651-06-9, Bayrena 653-03-2,
 Butaperazine 655-35-6 671-95-4 703-80-0, 3-Acetylindole 723-46-6
 729-99-7 738-66-9, Bis(4-nitrophenyl) carbodiimide 751-97-3, Reverin
 768-90-1 768-94-5, Tricyclo[3.3.1.1^{3,7}]decan-1-amine 776-34-1
 776-75-0, Benzoylpiperidine 795-13-1, Formyl sulfamethin 804-63-7
 828-51-3 846-50-4 849-55-8, Buphenin hydrochloride 873-76-7
 882-09-7 914-00-1, Methacycline 935-56-8 956-04-7 963-07-5
 968-81-0, Acetohexamide 980-71-2 982-24-1, Clopenthixol 992-21-2,
 Lymecycline 1050-48-2, Benzilium bromide 1071-93-8 1072-71-5,
 2,5-Dimercapto-1,3,4-thiadiazole 1098-50-6, Dansylvaline 1100-21-6,
 Dansylisoleucine 1100-23-8 1101-68-4, Dansylglutamic acid 1104-36-5,
 Dansylphenylalanine 1111-06-4 1126-46-1 1126-81-4 1134-47-0,
 Baclofen 1143-38-0, Cignolin 1145-80-8, N-Carbobenzoxo-L-serine
 1163-36-6, Allercur 1188-01-8, DL-Alanyl-glycine 1190-53-0
 1215-83-4, Clobutinol hydrochloride 1218-34-4, N-Acetyl-L-tryptophan
 1225-60-1, Andantol 1239-94-7, Dansylproline 1248-42-6,
 Baralgin-Ketone 1249-84-9, Azacosterol.hydrochloride 1260-17-9
 1263-03-2 1333-08-0 1397-89-3, Amphotericin B 1398-20-5, Baptisin
 1400-61-9, Mycostatin 1401-79-2, Vionactan 1404-26-8, Polymyxin B
 1404-88-2, Tyrothricin 1405-97-6, Gramicidin 1476-39-7 1477-19-6
 1538-09-6 1622-61-3, Clonazepam 1642-81-5 1649-18-9, Azaperone
 1684-42-0, Acranil 1798-50-1, Azacyclonol.hydrochloride 1812-30-2
 1824-50-6 1824-52-8 1824-58-4 1861-40-1, Benefin 1867-58-9
 1951-25-3 1986-53-4 2016-88-8, Amilorid.hydrochloride 2022-85-7
 2043-38-1, Butizid 2058-52-8, Clothiapine 2109-73-1, Butacetin
 2134-24-9 2138-22-9 2179-37-5 2350-32-5 2432-99-7 2465-59-0,
 Alloxanthine 2483-49-0 2508-72-7 2622-30-2, Carphenazine
 2667-89-2, Bisbentiamine 2751-09-9, Oleandomycin triacetate 3073-87-8,
 Dimethyl-Popop 3082-75-5 3274-19-9, 1-Acetylaminanthraquinone
 3287-99-8, Benzylamine hydrochloride 3347-56-6 3483-82-7 3485-62-9
 3505-38-2, Carbinoxamine maleate 3521-62-8 3533-97-9 3562-84-3
 3624-96-2, Bialamicol hydrochloride 3679-64-9 3684-46-6 3686-68-8,
 Cornecaine 3876-10-6 3922-90-5, Oleandomycin 4205-90-7, Clonidin
 4330-99-8 4361-81-3 4388-82-3, Barbexaclon 4393-72-0 4419-39-0
 4845-99-2 4942-47-6, Tricyclo[3.3.1.1^{3,7}]decan-1-acetic acid
 4985-15-3, Agedal 5068-28-0 5205-82-3, Bevoniummethylsulfate
 5251-34-3, Cloprednol 5355-48-6 5490-27-7 5568-90-1,
 Isopromethazine.hydrochloride 5585-73-9, Butriptyline hydrochloride
 5588-20-5 5591-49-1, Anilamate 5667-98-1, Baludon 5786-21-0,
 Clozapin 5843-82-3 5892-41-1 6011-39-8 6469-93-8, Chlorprothixene
 hydrochloride 6804-07-5, Carbadox 6933-90-0 7421-40-1 7542-37-2,
 Paromomycin 7683-59-2, Aludrin 8000-95-1, Caffeine sodium-benzoate
 8002-85-5 8044-71-1, Cetrimide 8059-24-3, Adermine 8068-28-8,
 Colistimethate sodium 10199-89-0 10268-71-0 10323-20-3,
 D(-)-Arabinose 12041-72-4, Formo-Cibazol 12246-80-9 13068-66-1
 13296-94-1 13461-01-3 13539-59-8 13655-52-2, Alprenolol 13726-85-7
 13838-08-9 13900-12-4 13957-27-2 14205-39-1 14286-84-1
 14358-44-2 14414-68-7, Benzidine, hydrochloride 14548-46-0,
 4-Benzoyl-pyridine 14976-57-9 15148-80-8, Bupranolol hydrochloride
 15301-40-3 15318-45-3 15351-05-0 15686-71-2, Cefalexin 15761-39-4
 16862-11-6 17039-58-6, Dansylmethionine 17321-77-6 17344-99-9
 17671-51-1 17683-09-9 18010-40-7 18109-80-3 18109-81-4
 18323-44-9, Sobelin 18500-45-3 19461-29-1 20191-75-7 20448-86-6
 21352-09-0 21593-23-7 21898-19-1, Clenbuterol.hydrochloride
 22131-79-9 22198-72-7 22199-46-8 22316-47-8, Clobazam 22457-89-2
 23067-13-2 23110-15-8 23828-92-4, Ambroxol.hydrochloride 23964-57-0
 25122-57-0, Clobetasone butyrate 25161-41-5, Acevaltrate 27043-22-7,
 Ethoxybenzamide 27195-22-8 27323-18-8 27941-88-4 28217-22-3
 28217-24-5 28805-76-7, Aminobutyric acid 28860-95-9 28981-97-7

29022-11-5 29122-68-7, Atenolol 29546-59-6 30408-30-1, Nybomycin
30578-37-1

RL: BIOL (Biological study)

(binding of, to anti-dinitrophenol monoclonal antibody, allergic
cross-reaction mechanisms in relation to)

IT 30964-13-7 31135-62-3, Quinolinamine 31677-93-7 32442-99-2
32795-47-4, Alival 32862-97-8 32988-50-4, Viomycin 33386-08-2,
Buspirone hydrochloride 33817-20-8, Pivampicillin 35021-10-4
35021-12-6, Dansylserine 35021-16-0, Dansylthreonine 35026-16-5,
Dansylhydroxyproline 35661-40-6 35661-60-0 35737-10-1 35737-15-6
36413-60-2 36653-82-4, 1-Hexadecanol 37517-30-9, Acebutolol
41372-20-7 41451-91-6, Erythromycine 51264-14-3 51333-22-3
51481-61-9 51781-21-6 53164-05-9, Acemetacin 53716-49-7 54118-66-0
57470-78-7, Celiprolol hydrochloride 57775-29-8, Carazolol 62571-86-2,
Captopril 63460-06-0 63661-61-0 65571-68-8 65589-70-0 68858-20-8
71135-23-4 71989-16-7 71989-23-6 71989-28-1 71989-31-6
73724-45-5 73731-37-0 75364-47-5 81207-65-0 87980-20-9
91000-69-0 91394-66-0 92954-90-0 99103-36-3 104993-76-2
106323-02-8 116611-64-4 118477-74-0, Anthron 121343-82-6
125385-14-0, Acyclidine 139369-44-1 139369-45-2 139369-47-4
139369-49-6 139369-50-9 139369-51-0 139369-52-1 139390-98-0
139406-80-7 139411-94-2 139424-41-2 139465-03-5, Adonit M

RL: BIOL (Biological study)

(binding of, to anti-dinitrophenol monoclonal antibody, allergic
cross-reaction mechanisms in relation to)

IT 113-22-4, Styptanon 298-96-4, Triphenyl
tetrazolium chloride

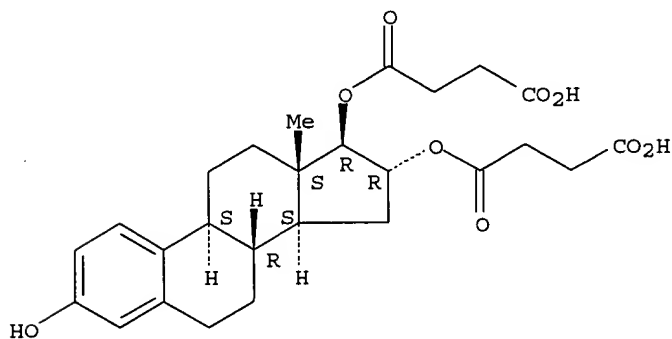
RL: BIOL (Biological study)

(binding of, to anti-dinitrophenol monoclonal antibody, allergic
cross-reaction mechanism in relation to)

RN 113-22-4 HCAPLUS

CN Estra-1,3,5(10)-triene-3,16,17-triol, 16,17-bis(hydrogen butanedioate),
disodium salt, (16 α ,17 β)- (9CI) (CA INDEX NAME)

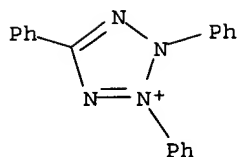
Absolute stereochemistry.



● 2 Na

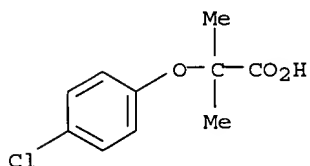
RN 298-96-4 HCAPLUS

CN 2H-Tetrazolium, 2,3,5-triphenyl-, chloride (8CI, 9CI) (CA INDEX NAME)



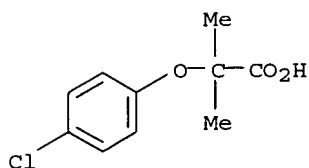
● Cl⁻

IT 882-09-7
 RL: BIOL (Biological study)
 (binding of, to anti-dinitrophenol monoclonal antibody, allergic
 cross-reaction mechanisms in relation to)
 RN 882-09-7 HCAPLUS
 CN Propanoic acid, 2-(4-chlorophenoxy)-2-methyl- (9CI) (CA INDEX NAME)

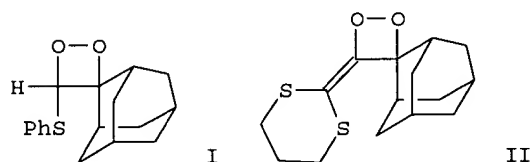


L67 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1986:17772 HCAPLUS
 DN 104:17772
 ED Entered STN: 24 Jan 1986
 TI Phototropism of Pellia: evidence for mediation by auxin-stimulated acid
 efflux
 AU Ellis, James G., IV; Thomas, Robert J.
 CS Dep. Biol., Bates Coll., Lewiston, ME, 04240, USA
 SO Journal of Plant Physiology (1985), 121(3), 259-64
 CODEN: JPPHEY; ISSN: 0176-1617
 DT Journal
 LA English
 CC 11-3 (Plant Biochemistry)
 AB The shaded sides of unilaterally illuminated sporophytes of *P. epiphylla*
 (Bryophyta) became more acidic than lighted sides. This acid efflux
 pattern developed before the onset of curvature, and was mimicked by
 unilateral application of IAA or fusaric acid (1 μ M). Curvature of
 dark-grown sporophytes was stimulated by differential surface abrasion
 followed by acid buffer treatment. Light-stimulated acid efflux and
 curvature were inhibited by treatment with 0.1 mM Na-orthovanadate
 ; 2-(chlorophenoxy)-2-methylpropanoic acid, TIBA, and pH 6.8 buffer.
 Apparently, auxin-stimulated acid efflux mediates phototropism of Pellia.
 ST phototropism Pellia auxin acid efflux
 IT Phototropism
 (of Pellia, auxin-stimulated acid efflux mediation of)
 IT Pellia epiphylla
 (phototropism of, auxin-stimulated acid efflux mediation of)
 IT Plant hormones and regulators
 RL: BIOL (Biological study)
 (auxins, acid efflux stimulation by, phototropism of Pellia in relation
 to)
 IT 88-82-4 882-09-7 13721-39-6
 RL: BIOL (Biological study)
 (acid efflux inhibition by, in Pellia, phototropism in relation to)

IT 87-51-4, biological studies 20108-30-9
 RL: BIOL (Biological study)
 (acid efflux stimulation by, in Pellia, phototropism in relation to)
 IT 882-09-7
 RL: BIOL (Biological study)
 (acid efflux inhibition by, in Pellia, phototropism in relation to)
 RN 882-09-7 HCAPLUS
 CN Propanoic acid, 2-(4-chlorophenoxy)-2-methyl- (9CI) (CA INDEX NAME)



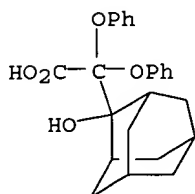
L67 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1982:509900 HCAPLUS
 DN 97:109900
 ED Entered STN: 12 May 1984
 TI The synthesis of spiro[adamantane-[1,2]dioxetanes]
 AU Adam, Waldemar; Encarnacion, Luis A. Arias
 CS Inst. Org. Chem., Univ. Wuerzburg, Wuerzburg, D-8700, Fed. Rep. Ger.
 SO Chemische Berichte (1982), 115(7), 2592-605
 CODEN: CHBEAM; ISSN: 0009-2940
 DT Journal
 LA English
 CC 28-4 (Heterocyclic Compounds (More Than One Hetero Atom))
 OS CASREACT 97:109900
 GI



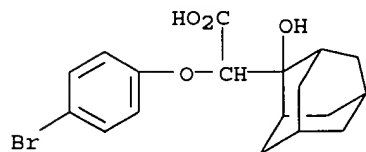
AB The spiroadamantane group stabilizes thermally labile 1,2-dioxetanes sufficiently to permit isolation. Thus, the first sulfur substituted dioxetanes I and II were prepared and characterized by low temp NMR. Photosensitized singlet oxygenation at low temperature, using either polymer-bound *Rose Bengal* or tetraphenylporphyrin as sensitizer, in CH₂Cl₂ of the corresponding 2-methyleneadamantanes was the method of choice for the prep of the spiro[adamantane[1,2]dioxetanes], provided that the methylene carbon bears no alkyl or Ph substituents. Hydroperoxybromination of the 2-methyleneadamantanes and subsequent dehydrobromination (K. R. Kopecky, 1975) proved unsuccessful to prepare the dioxetanes.
 ST spiroadamantanedioxetane; dioxetane spiroadamantane; methyleneadamantene photochem oxygenation cyclization
 IT Oxygenation
 (photochem., of methyleneadamantane, spiro[adamantane-oxetane] from)
 IT 122-59-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (bromination of)
 IT 110-91-8, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)
 (condensation of, with adamantanecarboxaldehyde)
 IT 832-80-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (condensation of, with adamantanethione)
 IT 23695-65-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (condensation of, with diazafluorene)
 IT 67-64-1, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (condensation of, with dibenzoyloxyacetate)
 IT 39750-93-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (condensation of, with morpholine)
 IT 68423-89-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (cyclocondensation of, with adamantanone)
 IT 700-58-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (cyclocondensation of, with lithiated Me isobutyrate)
 IT 547-63-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (lithiathion and condensation of, with adamantanone)
 IT 42760-82-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (lithiation and condensation of, with adamantanone)
 IT 82817-23-0P 82817-30-9P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and cyclization of, oxetane from)
 IT 82817-21-8P 82817-24-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and decarboxylation of)
 IT 82817-27-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and esterification of)
 IT 20441-18-3P 33521-89-0P 34399-61-6P 67774-20-3P 70882-47-2P
 82817-22-9P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and oxygenation of)
 IT 82817-19-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and photochem. oxygenation of, spirodioxetane from)
 IT 82817-20-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and thermal decarboxylation of, isopropylideneadamantane from)
 IT 875-72-9P 55975-24-1P 82817-25-2P 82817-26-3P 82817-29-6P
 82817-31-0P 82817-32-1P 82817-33-2P 82817-34-3P 82817-35-4P
 82817-36-5P 82817-37-6P 82817-38-7P 82817-40-1P 82817-41-2P
 82817-42-3P 82825-32-9P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)
 IT 82817-28-5P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation, lithiation, and condensation of with adamantane)
 IT 1878-91-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation, lithiation, and cyclocondensation with adamantanone)
 IT 82817-39-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)

(preparation, peroxymercuration, and bromination of)
 IT 82817-23-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and cyclization of, oxetane from)
 RN 82817-23-0 HCAPLUS
 CN Tricyclo[3.3.1.1^{3,7}]decane-2-acetic acid, 2-hydroxy- α,α -
 diphenoxy- (9CI) (CA INDEX NAME)



IT 82817-21-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and decarboxylation of)
 RN 82817-21-8 HCAPLUS
 CN Tricyclo[3.3.1.1^{3,7}]decane-2-acetic acid, α -(4-bromophenoxy)-2-
 hydroxy- (9CI) (CA INDEX NAME)



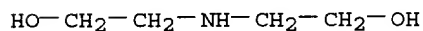
L67 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 1953:29887 HCAPLUS
 DN 47:29887
 OREF 47:5061e-g
 ED Entered STN: 22 Apr 2001
 TI The influence of growth stimulators on the enzymes of the germinating
 seed. I. Histochemical control of dehydrases by telluric acid and
 2,3,5-triphenyltetrazolium chloride
 AU Dykyj-Sajfertova, Dagmar
 CS Vyzk. ustav anorg. chemie, Usti n. Lab., Czech.
 SO Sbornik Ceskoslov. Akad. Zemedelske (1952), 25, 317-32
 DT Journal
 LA Unavailable
 CC 15A (Pesticides and Crop-Control Agents)
 AB The germination and the reduction ability of wheat and other kinds of
 seeds, stimulated by high concns. (1-2 + 10⁻³ M) of
 1-naphthaleneacetic acid and heteroauxin, were compared. To check
 reduction ability, H₂TeO₄ (I) and 2,3,5-triphenyltetrazolium chloride (II)
 were used. By high concns. of growth stimulators the embryo is not
 killed, only the growth is stopped and the enzyme activity is narcotized.
 The enzymic system has characteristics of dehydrases. The reduction
 potential of II is higher than that of I.
 IT Weed control
 (agents for)
 IT Reduction
 (by seeds, effect of growth regulators on)
 IT Plant regulators
 (effect on enzymes in seeds)

IT Wheat (enzymes in, 2,4-D effect on)
 IT Seeds (enzymes in, effect of growth regulators on)
 IT Wheat (enzymes in, effect of growth substances on)
 IT Enzymes (growth-regulator effect on, in seeds)
 IT Germination (plant-regulator effect on)
 IT ~~5742-19-8~~, Ethanol, 2,2'-iminodi-, compound with
 (2,4-dichlorophenoxy)acetic acid
 (effect on enzyme activity in wheat)
 IT 298-96-4, Tetrazolium, 2,3,5-triphenyl-2H-, chloride
 11120-48-2, Telluric acid
 (effect on enzymes in seeds)
 IT 86-87-3, 1-Naphthaleneacetic acid
 (effect on germination and reduction activity of seeds)
 IT 87-51-4, 3-Indoleacetic acid
 (effect on seed germination and reduction ability)
 IT 9044-86-4, Dehydrase
 (in seeds, effect of growth regulators on)
 IT 5742-19-8, Ethanol, 2,2'-iminodi-, compound with
 (2,4-dichlorophenoxy)acetic acid
 (effect on enzyme activity in wheat)
 RN 5742-19-8 HCAPLUS
 CN Acetic acid, (2,4-dichlorophenoxy)-, compd. with 2,2'-iminobis[ethanol]
 (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 111-42-2

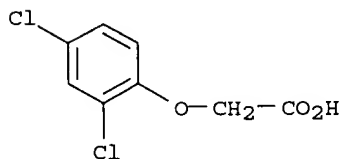
CMF C4 H11 N O2



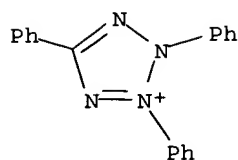
CM 2

CRN 94-75-7

CMF C8 H6 Cl2 O3



IT 298-96-4, Tetrazolium, 2,3,5-triphenyl-2H-, chloride
 (effect on enzymes in seeds)
 RN 298-96-4 HCAPLUS
 CN 2H-Tetrazolium, 2,3,5-triphenyl-, chloride (8CI, 9CI) (CA INDEX NAME)



● Cl⁻

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L84 ANSWER 1 OF 4 CABA COPYRIGHT 2005 CABI on STN

AN 2003:196312 CABA

DN 20033173664

TI Callus cultures of Genista plants - in vitro material producing high amounts of isoflavones of phytoestrogenic activity

AU uczkiewicz, M.; God, D.

CS Department of Pharmacognosy, Faculty of Pharmacy, Medical University of Gdan[acute]sk, al. Gen. J. Hallera 107, 80-416, Gdan[acute]sk-Wrzeszcz, Poland. mlucz@farmacja.amg.gda.pl

SO Plant Science, (2003) Vol. 165, No. 5, pp. 1101-1108. 32 ref.

Publisher: Elsevier Science Ltd. Oxford

ISSN: 0168-9452

CY United Kingdom

DT Journal

LA English

ED Entered STN: 20031209

Last Updated on STN: 20031209

AB Callus cultures of six Genista species were established with the objective to produce isoflavones of phytoestrogenic activity. The cultures were optimized for their growth and isoflavonoid production by changing various media in the presence or absence of light. The best growth and the highest isoflavone production was obtained under constant light regime on SH basal medium containing 22.6 [micro]mol 1-1 2,4-dichlorophenoxyacetic acid (2,4-D), 23.2 [micro]mol 1-1 kinetin and 3% w/v of sucrose. Callus cultures of all species produced more isoflavones than the parent herbs. The isoflavonoid group produced was composed of 14 compounds with a clear domination of genistein. In vitro cultures had lower contents of genistein esters than the herbs - possible causes are discussed. The callus with the highest isoflavone content was obtained from Genista tinctoria, producing 6586.5 mg of total isoflavones per 100 g DW, in which HPLC analysis identified 3016.3 mg of genistin.

CC FF003 Horticultural Crops (New March 2000); FF060 Plant Physiology and Biochemistry; FF170 in vitro Culture of Plant Material

SC 7Q; 7C; 7B; 0C; 7W; 0P; CA; HO; PL; AA

BT Genista; Papilionoideae; Fabaceae; Fabales; dicotyledons; angiosperms; Spermatophyta; plants

CT 2,4-D; callus; cell culture; in vitro culture; isoflavones;

plant growth regulators; plant oestrogens; tissue culture
 RN 94-75-7; 5742-19-8; 2008-39-1; 3599-58-4; 2569-10-9;
 94-11-1; 1929-73-3; 94-80-4; 25168-26-7
 ORGN *Genista tinctoria*

L84 ANSWER 2 OF 4 CABA COPYRIGHT 2005 CABI on STN
 AN 2003:80106 CABA
 DN 20033054090
 TI Cell cultures of *Pueraria lobata* (Willd.): growth and production of
 isoflavones and puerarin
 AU Liu, H. L.; Li, L.
 CS Department of Biology, South China Normal University, Guangzhou, 510631,
 China. liling@scnu.edu.cn
 SO South African Journal of Botany, (2002) Vol. 68, No. 4, pp. 542-544. 17
 ref.
 ISSN: 0254-6299
 DT Journal
 LA English
 ED Entered STN: 20030502
 Last Updated on STN: 20030502
 AB Callus and suspension cultures of *P. lobata* were established in Gamborg B5
 medium supplemented with 1 mg 2,4-dichlorophenoxyacetic acid/litre, 1 mg
 NAA/litre, 0.5 mg kinetin/litre and 30 g sucrose/litre. The total
 isoflavone and puerarin contents in the natural roots, callus and
 suspension cultures were quantitatively compared by spectrophotometry and
 HPLC. Secondary product accumulation was low in the in vitro-grown
 material.
 CC FF003 Horticultural Crops (New March 2000); FF060 Plant Physiology and
 Biochemistry; FF170 in vitro Culture of Plant Material
 SC 7Q; 7W; 0C; 7B; 5C; CA; HE; HO
 BT *Pueraria*; Papilionoideae; Fabaceae; Fabales; dicotyledons; angiosperms;
 Spermatophyta; plants
 CT 2,4-D; callus; cell culture; cell suspensions; growth; in vitro culture;
 isoflavones; kinetin; medicinal plants; NAA; plant growth
 regulators; roots; secondary metabolites; sucrose; tissue culture;
 traditional medicines
 RN 94-11-1; 1929-73-3; 94-80-4; 25168-26-7; 525-79-1; 86-87-3; 57-50-1;
 94-75-7; 5742-19-8; 2008-39-1; 3599-58-4; 2569-10-9
 ORGN *Pueraria lobata*

L84 ANSWER 3 OF 4 CABA COPYRIGHT 2005 CABI on STN
 AN 93:134423 CABA
 DN 19931643947
 TI The effect of cultural conditions on the accumulation of formononetin by
 suspension cultures of *Glycyrrhiza glabra*
 AU Arias-Castro, C.; Scragg, A. H.; Rodriguez-Mendiola, M. A.
 CS Department of Molecular Biology and Biotechnology, University of
 Sheffield, Western Bank, Sheffield S10 2TN, UK.
 SO Plant Cell, Tissue and Organ Culture, (1993) Vol. 34, No. 1, pp. 63-70. 37
 ref.
 ISSN: 0167-6857
 DT Journal
 LA English
 ED Entered STN: 19941101
 Last Updated on STN: 19941101
 AB Secondary product accumulation by suspension cultures of *G. glabra* was
 studied. The cultures did not accumulate either glycyrrhizin or
 glycyrrhetic acid but did produce the isoflavonoid formononetin (FN). FN
 accumulation was maximum (2.5 mg/g dry weight (DW)) at pH 7, and
 generally decreased with increasing sucrose concentrations. 2,4-D induced
 the fastest growth, and was the only auxin studied and zeatin the only
 cytokinin studied to stimulate FN accumulation; maxima were 2.53 and 4.52
 mg/g DW, respectively. FN accumulation was greatest in medium containing
 Gamborg's B5 organics and half-strength B5 inorganics, 0.5 mg 2,4-D and
 0.05 mg kinetin/litre. Initially formononetin accumulation was non-growth
 related but became growth associated when the medium was modified.

CC WW000 Biotechnology (General) (Revised June 2002); FF040 Plant Composition; FF170 in vitro Culture of Plant Material; FF020 Plant Breeding and Genetics; FF060 Plant Physiology and Biochemistry; FF100 Plant Production

SC CA; HE; PL; 7B; 7W

BT Glycyrrhiza; Papilionoideae; Fabaceae; Fabales; dicotyledons; angiosperms; Spermatophyta; plants

CT Biotechnology; Plant growth regulators; Medicinal plants; Isoflavonoids; Liquorice; Glycyrrhizin; Cell culture; formononetin; 2,4-D; zeatin; kinetin; composition; growth rate; cytokinins

ST Glycyrrhetic acid

RN 1405-86-3; 485-72-3; 94-75-7; 5742-19-8; 2008-39-1; 3599-58-4; 2569-10-9; 94-11-1; 1929-73-3; 94-80-4; 25168-26-7; 1637-39-4; 525-79-1

ORGN Glycyrrhiza glabra; Glycyrrhiza

L84 ANSWER 4 OF 4 CABA COPYRIGHT 2005 CABI on STN

AN 78:66107 CABA

DN 19781346016

TI Effects of growth substances on non-induced and Botrytis cinerea culture filtrate-induced phaseollin production in Phaseolus vulgaris cell suspension cultures

AU Dixon, R. A.; Fuller, K. W.

CS Bot. Sch., Oxford Univ., UK.

SO Physiological Plant Pathology, (1978) Vol. 12, No. 3, pp. 279-288. 4 fig., 2 tab. 27 ref.

DT Journal

LA English

ED Entered STN: 19941101
Last Updated on STN: 19941101

AB Suspension cultures of P. vulgaris produced the phytoalexin phaseollin in the absence of added inducers. The concs. of plant growth substances in the culture medium affected growth of the cultures and the extent of phaseollin production, both in untreated cultures and in response to treatment with sterile culture filtrates from B. cinerea. 2,4-D was inhibitory to induced production at concs. of c. 2×10^{-6} M and above, whereas 1-naphthylacetic acid only inhibited significantly at 2×10^{-4} M. Gibberellic acid and abscisic acid both stimulated non-induced production, abscisic acid also inhibiting growth of the cultures. High kinetin concs. were inhibitory to non-induced production, but partially relieved inhibition of induction in culture filtrate-treated cells caused by growth in high concs. of 2,4-D. This increased response was associated with higher phenylalanine ammonia-lyase activity during the induction period than observed in cultures grown in low kinetin concs. However, as phenylalanine ammonia-lyase activity was often higher in control than in induced cultures, it is unlikely that this enzyme plays a regulatory role in phaseollin biosynthesis in this system.

CC FF600 Pests, Pathogens and Biogenic Diseases of Plants (Discontinued March 2000)

SC CA; CR; HO; PE; OM; OC

BT phenoxyacetic herbicides; phenoxy herbicides; herbicides; pesticides; auxins; plant growth regulators; gibberellins; growth inhibitors; cytokinins; Fabaceae; Fabales; dicotyledons; angiosperms; Spermatophyta; plants; Botrytis; Deuteromycotina; Eumycota; fungi

CT beans; effects; growth regulators; phytoalexins; Phaseollin; 2,4-D; NAA; gibberellic acid; Absciscic acid; Kinetin; diseases; production; tissue culture; grain legumes; vegetables; vegetable legumes; plant pathology; plant growth regulators

ST phaseollin production; phaseollin production in bean; phytoalexins production

RN 13401-40-6; 94-75-7; 5742-19-8; 2008-39-1; 3599-58-4; 2569-10-9; 94-11-1; 1929-73-3; 94-80-4; 25168-26-7; 86-87-3; 77-06-5; 21293-29-8; 525-79-1

ORGN Botrytis cinerea; Phaseolus; Fabaceae

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